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CLINICAL LECTURE.

ŒDEMA AS A SYMPTOM OCCURRING IN MALIGNANT DISEASES—DIAGNOSIS BY LAVAGE—ACUTE GASTRITIS.

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Gentlemen:—This man came to us last fall for an opinion as to his condition. At the time I found a tumor in the epigastrium and left hypochondriac region, extending from the ribs downward and forward to the umbilicus. By a thorough emptying of the bowel, it was proved that it did not depend upon a fæcal mass in the colon, it must lie either on or over the stomach and particularly on the lower border of the stomach. I decided that it depended upon a malignant neoplasm of the greater curvature of the stomach and probably of the omentum also. This tumor remains in the same position, it is larger, it is more superficial, it is more tender than it was, you can see it now as well as feel it. When he is lying down it is very apparent, running from the free border of the ribs in the left hypochondrium downward toward the umbilicus.

The man has had great pain, from which he still suffers. The treatment consisted in the administration of morphine to relieve pain, and the giving of peptonized milk. You remember that we found a marked diminution of urea, there being not more than half the normal quantity—a symptom which I consider of great importance in the diagnosis of malignant growths in the abdominal cavity and elsewhere.

Lately, this man has developed œdema, and his legs are now bandaged to support them. You can see the lines of the bandage upon his calves. His right leg is worse than the left. He had no œdema at all when he first came here. I presume he weighed twenty pounds more than he does now; although he has had rest, he has not exercised, he has been fed all he could eat, and particularly of milk and predigested foods. Œdema is an important symptom always, and we must seek its cause carefully. When there is general œdema it usually shows over the sternum and ribs. I do not find it here. There is nothing in the heart to explain his œdema. At first thought you would say that his œdema was to be explained by his anæmia and by the disturbance of the blood from the carcinomatous disease from which he suffers, and that may be quite enough to account for it. General œdema and very marked anasarca are part of the typical history of the later stages of malignant disease. You know how apt it is to occur in the later stages of phthisis. No matter where the neoplasm exists, the waxy appearance of the skin and the œdema especially localized to the feet is part of the general cachexia. In this case it so happens that in addition to the cancers and its accompanying anæmia, there is something wrong with the kidneys. The urine contains albumen which has increased in quantity, the urine is loaded with casts and desquamated epithelium. The patient has a chronic, diffuse nephritis, due either to the malignant disease directly, or it may be of an entirely different nature. Its rapid increase, however, concomitant with that in the tumor of the abdomen, makes me think that there is malignant disease of at least one kidney. But we must not be carried away in our reasoning by any preconceived idea. As an illustration of

the errors into which preconceived ideas lead us, I might relate the anecdote of a professor in a Southern medical college, into whose clinic a man came whom he thought he recognized. The professor turned to his class and said: "Now, gentlemen, look at this man; can you tell me what is the matter with him?" And, as no one replied, he continued, "He looks perfectly well to you, I suppose, but the moment I put my eyes on this man I knew he was a deaf mute; he can neither hear nor speak." At this point the man spoke up and said: "I beg your pardon, boss, but it is my brother who is a deaf mute; he sent me in to see if you were ready for him."

It is very easy to get a preconceived idea about a case; therefore, before you make up your mind that a patient has a certain condition you must demonstrate it without jumping at conclusions. I might very easily have explained this œdema to you on the ground of the blood dyscrasia due to the malignant disease, and we might have neglected his kidney lesion, but by carefully diagnosing and then attending to it, we may be able to prolong his life.

I shall continue with the morphine to relieve this man's pain, the peptonized milk to support him. His bowels shall be kept open and his skin stimulated. There will be no medication directed especially against the Bright's disease.

DIAGNOSIS BY LAVAGE.

This patient has been under treatment for what has been supposed to be gastric ulcer. He is a woodsman, aged 45, who has been obliged to discontinue his work on account of vomiting, pain in the stomach, fermentation, with the formation of gas and intestinal indigestion in addition to the condition in the stomach. He has been on a milk diet, with salol and pancreatine given after meals, the former to prevent fermentation, the latter to aid in the digestion of the milk. At present he is without pain, he has no vomiting and he feels very well. Without discussing in detail the reasons for the diagnosis of gastric ulcer, I would say that of late we have been led to reconsider the question. In the first place, 75 per cent. of all cases of gastric ulcer occur in women, and they generally occur early in life, whereas this man is over 40. It is rare for an ulcer to occur in a man enparticularly in the morning, after breakfast, while in ulcer it occurs typically with equal frequency after every meal. If he gaged in hardy out-door work. Again, his vomiting has been noticed to occur would not empty his stomach by vomiting immediately he suffered pain. That is like gastric ulcer. The pain was rather localized, and at a point where the pain of gastric ulcer is usually felt, midway between the ensiform cartilage and the umbilicus, and a little to the right of the median line. There is local tenderness at this point also, but although I do not find a general tenderness, I can make out several tender points. The pain of gastric ulcer is usually made worse by eating at any time, but, on close questioning, I find that sometimes our patient can eat without any disturbance whatever. His vomiting, he says, has been sour, a symptom which is characteristic of gastric ulcer, in which, according to my experience, there is always an excess of hydrochloric acid. I must accept, however, the statement of other observers, who assert that ulcer is not always accompanied with an excess of hydrochloric acid. The contents of his stomach have not been examined, for the presence of this acid and the sourness complained of may have been due to acids of fermentation, acetic, lactic, etc.

This case is a little perplexing, and while strongly suggestive, it is not typical of gastric ulcer. Let us see if it can be explained on another hypothesis. There is a neurosis of the stomach, characterized by the excessive secretion of hydrochloric acid and by gastralgia. I believe that gastric ulcer depends upon imperfect innervation of a certain part of the stomach in connection with the same acid neurosis, and that owing to the intensity of the hydrochloric acid and the stomach ferments, this portion of the stomach is digested. But there may be the same group of symptoms of gastralgia, vomiting, localized tenderness and excess of hydrochloric acid without the actual existence of the ulcer. When there is no ulcer, but simply the acid neurosis, there may be occasionally a meal taken without any pain whatever, and then the next meal will cause pain. Depending upon that one point, I might dismiss this as a case of gastric acid neurosis, but the diagnosis can only be made after careful study, and we must not go so fast, for men and women have died of gastric ulcer without having had pain,

vomiting or any other recognized symptom, and yet the ulcer has been found *post mortem*.

I propose, therefore, to empty this man's stomach through the tube and examine its contents, first, to see if there is an excess of hydrchloric acid; secondly, to ascertain the digestive strength. Three or four hours ago he had a meal of bread and butter, meat, egg, and some milk. The egg and milk I did not intend him to have. Now we ought to find the stomach contents a pulpy mass, showing the meat decolorized, the starch dissolved and hydrated; the butter ought not to appear as distinct particles of floating fat, but the capsules of the fat cells should have been broken up and the contents should have passed in large part into the intestine.

Ordinarily, for the purpose of emptying the stomach, it is best to have a continuous tube, for joints are apt to interrupt the outward flow of solid substances. It should be four or five feet long and an inch and a half in circumference. It should be flexible enough to be introduced into the œsophagus without causing damage, but not too soft. It should have two openings into the stomach, one at the end as large as the lumen of the tube, the other on the side, so as to render accidental plugging of the tube less likely to happen, but this opening should be less than an inch from the end, as otherwise gas entering it from the stomach might spoil the siphonage. The stomach tube is usually passed twenty two (22) inches from the teeth. Sometimes, owing to dilatation of the stomach, it is necessary to insert the tube to a depth of from twenty-five to twenty-eight inches, and the distance depends somewhat on the height of of the body, but there is unusual uniformity in the rule that the tube acts best when passed to a depth of twenty-two inches.

I will now introduce the tube, directing the patient to give most of his attention to taking long breaths, in order to distract his attention from the tube. It is a good plan to have the patient vomit some of the gastric contents undiluted, but often, as in this case, it is necessary to put in a little hot water, so as to fill the siphon, and it is well to make sure that the water is not too hot.

After some manipulation of the tube, I remove part of the stomach contents, showing lumps of undigested meat, oil floating on the surface of the fluid, and starchy food in masses. I see nothing in the way of milk or milk curd. The digestive strength of the stomach is below par, and as there is so much solid matter, we will abandon the attempt to empty the stomach and withdraw the tube. Applying the phloro-glucin-vanillin test, there is a fair reaction to hydrochloric acid, but no excess. The chloride of iron and carbolic acid test shows the absence of lactic acid.

Considering this man's age and occupation, the history of pain and vomiting, in the morning particularly, and not always following meals, the absence of an excess of hydrochloric acid, the slowness in the digestion of meat and albumen of all kinds, all of which things are contrary to the idea of gastric ulcer, it seems to me that this man has not that disease. Furthermore, he has not that form of neurosis of the acid type which I have described to you. He has a form of indigestion in which the ferments are not of sufficient strength, and he is lacking in the power to digest albumen. This we can prove by filtering part of the gastric contents and adding a small amount of egg albumen and noting the time necessary for digestion at the ordinary temperature. The time should be two or three hours, if it be five or six hours the stomach is weak, and if the egg remains for twenty-four hours without change, the peptic strength is practically nothing.

The origin of this man's trouble was probably from taking too large amounts of food when he was tired and unable to digest it. The pain from which he has suffered is an ordinary gastralgia. How to account for the local tenderness I do not know, unless there has has been some local injury to the stomach by a hard fragment of bone which he has swallowed.

I am inclined to think that by giving a milk diet, with long intervals between the meals, he will improve. The milk should be given digested, if necessary, either by peptonising it or by giving pancreatine with it, as is now being done. If he had an excess of hydrochloric acid, either with or without ulcer, I would give frequent meals to keep the acid busy digesting food rather than acting on the stomach wall. The treatment of the acid condition by complete rest of the stomach and rectal nutrition may also be carried out, for if we give no food the acid will not be secreted. But one extreme or the other of treatment must be carried out.

ACUTE GASTRITIS.

There is little in the history of this case that needs to be repeated. A man of forty-three, in good health, save that he had been drinking, and while somewhat under the influence of alcohol, he went into a barber shop and was there given to drink what purported to be bay-rum, but which was in fact a mixture of bay-rum and ammonia. How much of this he drank he does not know, but probably three or four ounces. He fell down and lost consciousness, and then the next thing he remembers is that he was in the hospital. He was treated at once by the accident hospital surgeons; his stomach was emptied and he was given demulcents. He was brought here unconscious, but he very soon revived and the stomach was found to be acutely inflamed. This is an instance of a rather rare disease, according to my classification—acute gastritis. He had the usually profound symptoms, which subsided under treatment, but they were followed by symptoms of sub-acute gastritis, which is very apt to follow the acute. The sub-acute gastritis was accompanied by such symptoms as vomiting, tenderness on pressure, general malaise, slight rise of temperature, a continued albuminuria, which was present during the acute gastritis, and wakefulness. The sub-acute gastritis might possibly have been, to a certain extent, due to the alcoholic habit. He has been drinking right along since Christmas, and probably his nervousness and vomiting have been due in part to that fact. He has made a good convalescence on demulcents and rectal nourishment till he was able to take food by the mouth, when he was given peptonized milk in small quantities.

The symptoms of acute gastritis, properly so called, are pain, tenderness, vomiting, and the vomit containing mucus and sometimes blood and shreds of mucous membrane, generally high fever, usually very marked cerebral disturbances and often albuminuria, sometimes casts and blood appearing in the urine as well as albumen; sometimes hæmorrhages and melæna or bloody discharges, showing the presence of changed blood in the stools.

I am not going to quarrel with those writers who call what is described here as sub-acute gastritis, acute gastritis. It is simply a question of terms. But remember, when you have an acute gastritis due to poisoning or the swallowing of hot fluids, you have a serious disease to deal with. That which is ordinarily called acute gastritis, I think is properly called sub-acute gastritis, since its symptoms are much milder. The treatment by demulcents is very important. A person may be given oil when he is vomiting to make the vomiting easier and to help empty the stomach. Pure salad oil may be given; after that mucilaginous drinks, like acacia water or slippery elm tea, or albumen in water should be administered until the stomach is quieted down. Then the patient should be given bismuth stirred in water, not the dry powder. It cannot be dissolved, but it can be suspended in mucilage water better than in clear water. It acts as a dressing to the inflamed mucous membrane. With the bismuth I think it is very useful to give cerium oxalate, and it is also advisable to give such patients morphine hypodermically.

COMMUNICATIONS.

THE MEDICAL TREATMENT OF APPENDICITIS, WITH A REPORT OF FIVE CASES ENDING IN RECOVERY.*

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The diagnosis, symptomatology, and pathology of diseases in the region of the cæcum have been so recently and ably given by Drs. Price and Morton, members of the society, that it would be useless for me to go over the ground again and attempt to add anything new on the subject. Surgery has made such marvellous advancement and accomplished such brilliant results in the last decade, that the medical treatment of certain diseases appears, at least for the time being, to be eclipsed. I am led to believe, from my limited experience, that some of our younger surgeons are too ready to perform abdominal section before they have exhausted the medical armamentarium, which, though perhaps somewhat slower, *may* be surer and subject the patient to less risk.

I think the surgeon in consultation with the physician will be able to determine and select the cases for operation, if they are so fortunate as to see them in

* Read before the Philadelphia County Medical Society, December 9th, 1891.

their incipiency, but in many of these cases the physician is called in late, and the surgeon later—too late in some cases.

We are all more or less infatuated with the wonderful results of present surgery, because, I think, it is something tangible. We make our diagnosis of appendicitis, open the abdomen and remove the diseased organ. There is the ocular proof of our skill in diagnosis and operation. In medical treatment our evidence, if we can produce any, is not so conclusive. It is of a more circumstantial character.

No one of the same experience feels more deeply than I do the debt of gratitude we owe to aggressive surgeons, and no one, I think, takes the knife with more satisfaction, but I must always be *certain* that it is the *only* or safest method for the patient.

In the five cases that I wish to report, I demonstrated within twenty-four hours—in four of them at least—that an operation was not necessary, and all the five recovered without section. You may infer that they were all mild or benign. Three of them were, because seen early and treated vigorously.

Perhaps the title of my paper is not broad enough to cover it, but I wish to include in the medical treatment of typhlitis everything short of surgical operations, for I rely as much, or more, on mechanical measures as on internal medication. I wish to report what I consider as the most critical case first, though it was my third in regard to date. The first case dates from March, 1889.

In four of the cases other physicians had been in attendance, or saw the patient with me in consultation. Two of the cases came to my notice late in the disease, and to make the history complete, I shall be obliged to read parts of several letters which were kindly written to me by the physicians who first had the cases in charge.

For the previous history of the first case, I am indebted to the kindness of Dr. Edwin B. Wheeler, who wrote me the following letter two months after treating the case:

"Was called to see Master A., thirteen years old, Thursday, April 2, 1890. He had been constipated a day or two, evidence conflicting as to the condition of the bowels previous to that time. There had been no diarrhœa, however. I first thought it a case of typhoid fever, as the father had just recovered from that disease. I ordered a powder of calomel, but no action. Then gave one bottle of citrate of magnesia in half-bottle doses, with no result. The pain and tenderness in inguinal region increasing. Some tympanites. Gave injection of tepid, soapy water, with a few drops of turpentine without any result. On Friday I gave drachm doses of Rochelle salts in one-third of a glass of water every hour for four doses, and tincture of hyoscyamus. There was no result so far as any action of the bowels was concerned. The vomiting was increasing and the tenderness covering a larger area. During this time it had become apparent that we had to deal with an obstructed bowel due either to intussusception typhlitis or perityphlitis.

"Injections on Saturday morning were not retained. Passes up a catheter, but still injection was not retained. Gave morphine in small doses. Saturday p. m. Dr. J. H. Dripps saw the case with me. We agreed as to the case, but were both on the fence as to the advisability of section. We then called in Dr. Noble, of the Kensington Hospital, Saturday, 6 p. m. After talking over the case, we concluded that the boy's best chance was to have the belly opened and the obstruction removed. We ordered a room cleaned and agreed to see the case the next day.

"At 9 a. m., Sunday, April 6th, we (Drs. Dripps, Noble and myself) met and concluded that the boy's chance would be slight if we operated in such unsanitary quarters, with such nursing as the father and mother could give. The parents agreeing, we wrote to the Pennsylvania Hospital, asking them to take the case, the father to let me know the result of his errand. We separated with the understanding that if the hospital refused to admit him, we would operate, Dr. Noble saying he would hold himself in readiness until 2 p. m.

"'About 11 a. m., the father informed me that the hospital authorities would send for the case as soon as I desired. I sent him back to the hospital with word to send for the case immediately. Somewhere about 3 p. m. the father informed me that he had been down town, but did not go to the hospital. He had stopped to see the boy's aunt, who said he should not go to the hospital. Whereupon I dismissed the case, refusing to have anything further to do with it. The case has certainly resulted very fortunately in your hands, and I am truly pleased, etc."

I will not go fully into the diagnosis of this case, for I was perfectly satisfied when I learned from the father who had consulted in the case.

"I was called in to the case at 10 p. m., Sunday, April 6th. The symptoms all indicated complete obstruction of the bowel and collapse. He had vomited first on Wednesday. The temperature was 96½°; pulse indistinct at wrist; heart was 140 per minute, and he was in a cold perspiration; respiration 40. Abdomen exceedingly tympanitic and bladder much distended. There was stercoraceous vomiting, and nothing had been kept on the stomach for days. I at once gave a hypodermic of morphine, atropine and strychnine, and then emptied the bladder by a catheter, and about sixteen ounces of water passed. The patient was apparently moribund, but revived somewhat after the hypodermic injection, and though I feared he would die while giving it, but I knew there was nothing to lose and thought there might be a slight chance for life if the obstruction could be removed, so I had him supported in the knee-chest position and injected a pint of warm liquid containing

castor oil, turpentine, whiskey and Epsom salts. This was about 11 p. m.

This was kept in the bowel for half an hour by a compress, held in position by the hand, then he was allowed to lie down on the right side. Within an hour there was copious evacuation of liquid with scybalous masses The injection was repeated at 12 o'clock, and another free movement resulted. These greatly relieved the tympany and pain. We then began to give turpentine and whiskey by the mouth once in two hours, and also a drachm of Epsom salts in hot water once in two hours alternately. Only the first dose of salts was rejected. The whiskey and turpentine were retained. These were regularly administered through the night. I left the patient at 1 a. m. asleep, and he had become much more comfortable.

"On returning in the morning, I found there had been several more movements, and the bladder had been emptied naturally. The tumor over the right iliac fossa had nearly disappeared, and the pain and tenderness were much less. The temperature was normal. The tongue and sordes on teeth indicated typhoid fever. There were five movements of the bowels within twenty-four hours after the enema, and not less than three to six any day after for two weeks. The temperature gradually rose to 102°, and the evening temperature was about that for a week, when it gradually declined, but did not become normal till the 29th, or three weeks from the time I first saw the case. The stools had quite the appearance of typhoid, as did the tongue, and there was a suspicious eruption on the chest and abdomen. After the obstruction was removed the case was treated as a simple case of typhoid fever. He had two grains of quinine and one-thirtieth of a grain of strychnine three times a day, with nitro-muriatic acid, pepsin and bismuth every four hours, and paregoric when needed to control the bowels, and a liquid diet throughout.

"At noon, the fourteenth day after I first saw him, after some pain and flatus, he passed a slough from the bowel, which, in the recent state, was elliptical and two and a half inches the long diameter. There seemed to be some pain and tendency to collapse, so he got another hypodermic and free stimulation. There was also a rise of 2° in temperature. He rallied the next day, and made a rapid and complete recovery.

"On May 6th, which was just a month from the time I first saw him, he sat up and took solid food.

"He is a strong, healthy boy and now drives for me."

I watched the case very closely throughout, and feel certain that the intussusception, or typhlitis, or perityphlitis, was followed by a clear case of typhoid fever. I am by no means so clear in regard to the pathological condition in the region of the cæcum and shall greatly appreciate the views of the members of the society on that point.

"The second case, Mr. M. K., who is a prominent and very active literary man in this city, dates from March 24, 1889.

"The patient gave me a very intelligent history of his case, which was that there had been a gradual decrease in the evacuations for several weeks, with a great deal of distention and discomfort of abdomen, and finally obstinate constipation followed. When I first saw him there had been no movement for several days.

"He had a tumor and localized pain in the right iliac fossa. Temperature 103½°. Pulse 120. Coated tongue, etc.

"He was given a hypodermic of morphine and atropine for the pain, which gradually spread over the abdomen as the gas accumulated. Two large doses of castor oil and turpentine were taken without any action. He took calomel, soda and ipecac powders for twelve hours, followed by Hunyadi water, but still there was no movement of the bowels. We then resorted to the enemata of turpentine, laudanum, castor oil, Epsom salts, and hot water, given in the knee-chest position. These moved the bowels freely and relieved the pain and distention. Turpentine stupes were also used freely.

"There was a double inguinal hernia in this case, and to satisfy ourselves that there was no strangulation of the gut, Dr. W. W. Keen was called in consultation, and pronounced the case free from any such complication and confirmed the diagnosis of appendicitis. He suggested pills of colocynth comp. and opium.

"The patient made a good recovery, and for several weeks took pills of aloin, strychnine, belladonna, cascara and physostigma to relieve the atonic condition of the bowel, and an occasional dose of Hunyadi, as he was rather stout and full-blooded.

"In July, or four months later, this same patient had a recurrence of the trouble while at the seashore, which began, possibly, with a slight tendency to constipation early, but the first the patient complained of was a severe serous diarrhœa with high temperature—104°. Pulse 128 (normal 58). Severe pain in the ileo-cæcal region. This attack began before I took up my summer practice at Cape May Point, and Dr. F. E. Stewart, of Wilmington, was called in.

"He made the diagnosis of colliquative diarrhœa, and gave acetate of copper and morphine to check it, and aconite for the fever, but nothing seemed to have any permanent control over the bowels.

Right here in this case, which was my first patient, but his second attack of appendicitis, I learned a very valuable lesson. Here was an obstructed bowel, and nature was trying, by pouring out a very excessive liquid secretion, to flush out the obstruction or foreign matter.

I simply took the cue from nature, and with small, frequently repeated doses of calomel, ipecac and soda, followed by salines, accomplished the object, and in less than six hours had the satisfaction of seeing the tumor, which had been in the region of the cæcum, deposited in a commode, which the black, very offensive mass nearly filled. In this attack we used hypodermic injections of morphine for pain, and pilocarpine for the high fever and dry skin and tendency of cerebral congestion, as the kidneys were not acting at all freely. There was no vomiting after the first hypodermic, and the patient began at once to take iced

champagne and Apollinaris, and soon was able to take milk and other liquid food.

In this case no resort was had to rectal enemata, as the bowels were thoroughly cleared out within six hours after the time I first saw the patient, and in three or four days he was attending to his regular business. He took the aperient, tonic pills for several months, and was requested to use Hunyadi water freely, and rectal injections, if the symptoms occurred again. He has had no recurrent attacks and no constipation since.

The fourth case, Miss S., occurred at Cape May Point, and was first seen and treated by Dr. F. E. Stewart, Wednesday, August 25, 1891. I wished to speak of this case at the special meeting, September 28th, when Dr. Morton read his interesting paper on "The Surgical Treatment of Appendicitis," and wired Dr. Stewart for his diagnosis, and he sent me the following telegram: "Case was obscure. Called Dr. David Stewart in consultation. He said 'appendicitis.'" I am indebted to Dr. F. E. Stewart for kindly furnishing me the history of this case, which I quote from his letter:

"In the case of Miss S., there were pain and tenderness over the abdomen, which, as the case developed, became marked in or over the right iliac fossa. Instead of dorsal decubitus, the patient sat in a chair with her thighs flexed on the abdomen, and could not lie down until relieved by treatment. There was fever; temperature 102°. There was constipation, nausea, and, if I remember correctly, some vomiting, but the latter was not a marked symptom of the case. I did not discover a tumor on abdominal palpation or vaginal touch, but Dr. David Stewart, who saw the case with me on the second day, called my attention to what appeared to be a doughy mass on the right side of the body on examination *per rectum*. I must confess that I would not have discovered said mass except my attention had been called particularly to it, or, in other words, I might have had a suspicion of its existence, but it required a finger of more education than mine in feeling for tumors of this nature to make a positive diagnosis.

"The treatment suggested consisted of hot turpentine stupes, opium and iodide of mercury. Under this she seemed to improve.

"From the beginning I recognized the gravity of the case. I advised her to go to the city at once, as proper nursing was out of the question, situated as she was at the Point. Furthermore, I told her if she got worse an operation might become necessary, and then it would be too late to remove her.

"I first saw the case on Monday, August 31st, at 6.30 p. m., and found her extremely weak and nervous from the trip from Cape May Point. The temperature was 103½°, pulse 120, abdomen tense, tympanitic and extremely sensitive. I found a large tumor in the region of the ileo-cæcal valve, intense pain and nausea. There was extreme tenderness over the tumor and abdomen generally, indicating a good deal of general peritonitis.

"Miss S. was brought to the city by her sister-in-law, and they went into a house where the furniture had just been piled in. There was not even a bed up or any convenience for heating water, so in regard to nursing and environment she did not improve her condition. When I arrived she was on a bed that had been hastily put up.

"The sister-in-law, who acted as nurse, got hot water for stupe and enema, and the patient had the same treatment, practically, as the boy—the first case reported—except that the nurse gave the enemata, who proved very intelligent and efficient.

"When I called next morning, I found the bowels had moved freely several times, and though the patient had had a restless night, she had slept some. The pain and distention were nearly gone and the temperature had fallen to 101°. By Wednesday, September 2d, the temperature was normal and the pain was entirely gone. She began sitting up Thursday, without my knowledge, and the next Wednesday she went back to the Point. I believe she had a slight recurrence of the pain, inflammation and constipation the week after she got home, but they were controlled by injections, stupes and opium suppositories.

"She has enjoyed good health since."

The other two cases of typhlitis, which occurred in my practice within the last year, were quite similar in regard to symptoms and treatment to the others that I have reported in detail, and as I relied only on myself for the diagnosis and treatment, I will not weary you with a repetition of them. I have not aimed to give the latest and most approved treatment from the text-books of the day, but what seemed to me to be indicated and necessary in the emergencies of these cases, when I dared not waste a moment in temporizing or experimenting. It appears to me a serious loss of time to depend solely on external applications to the abdomen and protiodide of mercury with belladonna and opium internally, when we have to deal with a bowel obstructed by hardened accumulation of fæces. I believe most cases of obstruction of the bowel, if not due to intussusception or strangulated hernia, are due to the absence of the natural secretion caused by the localized typhlitis, which, if not soon relieved, becomes a perityphlitis, and then more or less general peritonitis must result. The rational method seems to me to be: (1) To relieve the pain by hypodermic injections. (2) To remove the cause or obstruction by causing, if necessary, pathological or excessive secretion, by giving some saline, which I believe is the best antiphlogistic for the inflamed bowel. (3) To soften the hardened fæcal accumulation from below with

enemata, solution of Epsom salts in water as hot as can be comfortably borne, to which I add turpentine and oil. The knee-chest position, with copious enema, favors the distention of the colon up to the seat of the disease.

I have found by experience that the enema to be effective must be given in this position, and that it must remain in the bowel for some time, and in several of my cases it was necessary to repeat the operation three or four times. This plan of treatment has been successful in six cases, which are all that I have treated; but I fully realize that it may fail in the seventh.

I think it is truly in meetings like this that surgeons are broadened medically and physicians surgically—if I may be allowed the phrase. Doctors are only human, as we hear it said of ministers, and as such they are prone to do what they prefer, whether it be surgical or medical, and naturally they do best what they like to do and do oftenest.—*For discussion, see Society Reports.*

ABSCESS OF THE ANTERIOR VAGINAL WALL.*

HENRY R. SMITH, M. D.,
DETROIT, TEXAS.

I was consulted August 11, 1891, by Mrs. G.——, aged twenty-one, married two years. She has never been pregnant, looks swarthy, is weak and gets easily out of breath. She dates her present trouble back six years. First menstruated at twelve years of age; has not menstruated during the past four years; has constant pain in the lower part of the abdomen; has to get up three or four times during the night to urinate. She has a leucorrhœa and some pus from the vagina; temperature 101°; pulse weak, and has not been able to do her housework for some time past.

On digital examination I find a tumor-like body situated in the anterior vaginal wall, just inside the vulva, the size of an orange, hard to the touch, and no fluctuation. The exploring needle reveals pus. A free incision was made into the tumor, and a pint and a half of foul-smelling pus evacuated. The cavity, which measured four inches, was thoroughly curetted, and then irrigated with bichloride of mercury solution 1-2000, and also peroxide of hydrogen. The patient was seen three days later; some pus escaping. A drainage tube was introduced, and the cavity ordered to be washed out twice daily with bichloride solution. No fever.

On the tenth day after operation, patient was doing well. No cystitis; patient sleeps well at night; treatment continued.

Fifteenth day, menses returned, and not painful. Drainage tube removed, and cavity injected with tincture iodine. Twenty-first day, some pus discharging; drainage tube re-introduced; cavity ordered to be washed out twice daily with bichloride solution. Patient looks well; has gained twelve pounds in weight. Thirty-first day, no pus; drainage tube removed, and cavity injected with nitrate of silver.

Sixth week, there was no discharge; menses regular and not painful; no cystitis; abscess cavity retracted. Patient is now doing the cooking for twelve cotton pickers, and considers herself well. Case discharged.

I wish to say, in conclusion, that Mrs. G.—— has been taking medicine from doctors and using patent medicines for the past six years. The lower part of her abdomen is a solid scar from blisters.

* Read before the North Texas Medical Association, December, 1891.

THE SIMPLE EXTRACTION OF CATARACT.*

EDWARD JACKSON, M. D.,
PROFESSOR OF DISEASES OF THE EYE IN THE PHILADELPHIA POLYCLINIC AND SURGEON TO WILLS EYE HOSPITAL.

The old flap operation for the extraction of cataract, when it was successful, was one of the brilliant triumphs of operative surgery. The trouble with it in the old time, before the day of Graefe, was, that it was successful in only a minority of cases. The real achievement of the last few years with reference to it has been the increasing of the percentage and the perfection of its successes, until they have surpassed anything achieved by other operations for cataract extraction. This has been

*Read before the Philadelphia County Medical Society, October 28th, 1891.

brought about by collateral advances in medicine and surgery, that have given us an understanding of sepsis and asepsis, of the myotic power of eserine and its allies, and of the anæsthetic and other powers of cocaine.

My purpose in this paper is to discuss the operation of "simple extraction" as I practice it, with the reasons for choosing certain procedures rather than others, and some comparison of the results of the method with modified linear extraction, or modified Graefe method, which it has largely replaced. I used the term "simple extraction," because it is one commonly employed to designate the operation in question, and not to give the idea that cataract extraction was at all a minor or trifling operation. I think though that the term is strictly applicable, for the operation is distinctly simplified in certain directions. And in that it is more simple it conforms with the general tendency of surgical advance at the present time, which is toward the omission of various procedures that were formerly believed necessary, and the concentration of our attention on what is really essential, that it may be done in the best possible manner.

The corneal section is made upward, mainly because it seems to me that the wound in this position is much better protected beneath the closed lids from either infection or the relative displacement of its lips than the downward section can be. It is made in the clear cornea, sometimes as close as it can be to the limbus without encroaching on it. It is parallel to the corneal margin, the plane of the knife making it being parallel to the plane of the periphery of the iris. It is made to include nearly, and sometimes quite, half of the circumference of the circle of which it is a part. The exact position of the section and its length are determined by the size of the cornea and the supposed size of the lens. The plane of the section should be well in front of the iris, for the risk of prolapse of the iris is thereby greatly lessened, yet the incision must be long enough to permit the escape of the lens. The section is made with the knife described by me in the *American Journal of the Medical Sciences* for March, 1888, for the reasons there given, that it combines to to a large extent the manageableness of the Graefe knife with the smooth incision of the Beers knife. Usually the incision is almost completed by the forward thrust the cutting edge being carried by it out of the anterior chamber, and the remaining bridge of corneal tissue severed as the knife is withdrawn.

The capsulotomy is made with the point of the knife used in making the corneal section, and is about in the plane of the corneal section, as the lens lies against the cornea after the escape of the aqueous, I have in a few cases opened the capsule before completing the corneal section, as the point of the knife was carried across from the puncture to the counter-puncture. This was done in the fear that after the escape of the aqueous the pupil would contract so that it would be difficult or impossible to make a sufficient laceration of the capsule without wounding the iris with the knife-point. Such a manœuvre, however, required a slight change in the direction of movement, and prolonged a little one of the most critical periods of the operation. It was given up on finding that a sufficient opening in the capsule can always be made through the pupil after the completion of the corneal section. The opening that is necessary to make in the capsule is really quite small, a slit 4 or 5 mm. long is quite sufficient, probably because, when the solution in the continuity of the capsule is once started it extends quite readily, as widely as it is needed, under the pressure of the lens during the stage of its delivery.

The advantages of the method of opening the capsule are that by it we get rid of one instrument, the cystotome—an instrument hard to keep clean at the shoulder from which the pricking point projects, hard to get and keep perfectly sharp, liable from its shape to catch and damage the cornea or iris in case of sudden movement while it is in the eye, and which I have seen more than once, by its direct backward pressure, dislocate the lens and allow the escape of vitreous. Then the small opening in the capsule nearly in the direction of the corneal section seems to have a decided influence in making sure of the proper rotation and presentation of the lens in the corneal wound; and cortical matter as well as nucleus has a perfectly direct avenue of escape; and if cortical matter remains after the nucleus has been extracted, it remains inside the capsule, and not in the anterior chamber where it would exert its well-known deleterious influence on the iris; or, as some

have supposed, furnish an especially favorable culture medium for the pathogenic bacteria introduced on the shank of the cystotome or along a path of capsule incarcerated in the corneal wound. Again, with this method of opening it, there is no chance that portions of the capsule will prolapse or become incarcerated in the wound, and so complicate the healing and endanger the ultimate result more insidiously, but quite as seriously, as prolapse or incarceration of the iris.

This method of opening the capsule has this disadvantage, that when the pupil contracts, as it does in the process of washing out the anterior chamber, the iris sometimes entirely covers up the rent in the capsule and makes it much more difficult to dislodge any remaining cortical matter. Under these circumstances, it is best to make no effort to dislodge it, for, in my experience. cortical matter *left within the capsule* after the removal of the lens nucleus is innocuous, and is certain to be removed by absorption in a few weeks at the farthest, causing some delay in the full restoration of vision and detracting from the brilliancy of the operation, but in the end giving the patient the best result.

The delivery of the lens is effected by making pressure with a lens spoon backward on the lower portion of the cornea, and with a corneal spatula slightly downward upon the upper ciliary region, causing the lens to push into the pupil and engage in the corneal wound, the movement of the lens being steadily followed by a slight upward movement of the spoon, and the necessary pressure never relaxed until the greatest thickness of the lens has passed through the corneal section. It is of the utmost importance that the pressure be maintained steadily; any intermitting of it that causes the lens to alternately advance and retreat is liable to bring about the displacement of the lens, and the presentation of the vitreous in its stead. After the nucleus has escaped, the pressure is gently continued until any evident masses of cortex have also been extruded, and then withdrawn.

Washing out of the anterior chamber I have practised after the method and with the apparatus of Dr. Lippincott, of Pittsburg, for the last year, as the principal step in the operative toilet. If the iris has prolapsed, the stream of boric acid solution is the simplest and best repositor, its effect being to carry the iris into position, and at the same time to provoke a marked and very satisfactory contraction of the pupil. If the opening in the capsule remains freely accessible, the current may be directed into it and all lenticular *débris* removed. But if this is not readily accomplished, I content myself with a thorough washing out of the anterior chamber, at the end of which the pupil is found small and central, stroking of the iris with the spatula, or poking into the angles of the cornea wound to dislodge incarcerated iris or capsule, being thus dispensed with.

Eserine is instilled after the washing of the conjunctival sac, although the effect of the irrigation of the anterior chamber has been to already secure a small central pupil, in order that this contraction of the pupil may be maintained and the iris drawn as far as possible away from the cornea. In a single case in which I omitted the use of eserine a slight prolapse of the iris appeared at the end of thirty-six hours. Eserine was then used, and the prolapse promptly reduced. Later, however, it again appeared, and the pupil was left somewhat distorted.

Simplicity. As compared with the Graefe method and its modifications, "simple extraction" deserves its name, in that the iridectomy that it dispenses with is the most painful and one of the most delicate portions of the former operation, and that the uninjured iris is more readily reduced and kept wholly within the eye than the iris that has lost the tensile action of its sphincter. It prevents the extremely insidious accident of incarceration of the capsule. Again, the dangers of that serious complication, prolapse of the vitreous, are reduced to a minimum. Without rough handling, or especially unfortunate movement of the eyeball, it is scarcely possible for this accident to occur before the nucleus is delivered. Even in a case of dislocated lens with fluid vitreous the delivery of the lens was readily effected without the use of a spoon or loop, and no vitreous was seen until this had been accomplished.

Ease. The statement is usually made that with simple extraction the delivery of the lens is slightly more difficult. But, in my experience, this is true only to a slight extent as to the complete removal of the cortical matter. The delivery of the nucleus is not to any notable extent more difficult. I operated yesterday on a case where the lens were par-

ticularly large and the cornea small. From the other eye, in which the conditions were precisely similar, I had removed the lens several months ago, after a preliminary iridectomy, with a good deal of difficulty. The simple extraction was, if anything, the easier one. After the first operation a considerable amount of cortex remained in the capsule, and the same thing occurred with the second. Still, the removal of all remaining cortex is, I believe, a little more difficult after the simple extraction, though certainly not more dangerous.

Prolapse of the iris. The danger of this complication is the greatest drawback on simple extraction—about all that keeps it from being an ideal operation. When any considerable prolapse occurs it causes a distorted pupil, is liable to delay the healing, is followed by unusually high astigmatism, and, if very large, might endanger the eye. The impression is abroad that it is very much more likely to happen after simple extraction than after extraction with iridectomy, at least, it is scarcely counted as one of the risks of the latter operation. But iridectomy does not prevent the occurrence, except of the part of iris that has been removed. Indeed, in so far as it removes the restraining influence of the iris sphincter and leaves angles of iris floating within the eye, iridectomy directly favors incarceration, the form that prolapse assumes after it. Knapp has recently reported statistics of about five hundred cases of simple extraction, with prolapse of the iris in eight per cent. of the cases. It is probable that incarceration of a part of the iris at the angles of the wound is about that common among Graefe's extractions. In my own work prolapse has not been more common after simple extraction than was incarceration after iridectomy. More than this, the great mass of cases of prolapse under the use of eserine flatten down and cause as little trouble as the incarcerations after iridectomy, and do this without excision or any other special treatment, without notably delaying the healing, and, so far as can be judged, without any additional ultimate danger to the eye. I speak thus particularly about prolapse of the iris, for it was fear of it that kept me for a considerable time from giving up iridectomy. Still prolapse of the iris is the chief danger of the method and it should be carefully guarded against by the use of eserine, by keeping the patient as quiet as possible, by avoiding any pressure of the dressing or through the dressing on the globe, and by placing the corneal section as far away from the iris as possible, compatible with making it large enough to permit the escape of the lens.

Visual acuteness. The principal advantage of the simple operation is the exclusion from the eye of a large amount of very imperfectly focussed light, and the retention of the power of adapting the eye promptly and fully to the varying intensity of the light to which it is exposed. This advantage, although shown partly by statistics of visual acuteness, can never be fully exhibited in that way. An eye may be able to decipher even the smaller test-types, although their image on the retina is engulfed in a flood of unfocussed light coming in through distorted portions of the cornea opposite the coloboma left by an iridectomy. But even with only the ability to make out the same type, the vision secured by the exclusion of this useless and confusing excess of light is for all practical purposes far superior.

Again we find in age the retina habitually guarded against even the light admitted to the younger normal eye by a diminished pupil; and the reversal of this, the flooding of the senile eye, with its slower nutritive processes, with an amount of light largely in excess of what it has been accustomed to, especially the crippling of its power to defend itself against sudden increase of illumination cannot but diminish its power of resistance to unfavorable influences, and lead to ultimate deterioration of vision.

It was watching the gradual deterioration that occurred in certain eyes that had been subjected to extraction, with iridectomy, that first made me desirous of trying the simple method.

Indications for iridectomy. I am not aware of any operator who proposes the abandonment of iridectomy in all cases. It is pretty certain that in at least one class of cases all will continue to practice it, namely, those in which from iritic adhesions or from other causes the pupil is extremely rigid and undilatable. The other indications for it are not so well agreed upon, but probably one of the most important of them is extreme restlessness and insubordination on the part of the patient. All of my cases of prolapse

have been in patients markedly of that character. For the present most of us will be apt to fall back on iridectomy for a number of reasons, as I did in a case about a week ago where there was reason to suspect a large lens and saccharine diabetes, so that I feared sloughing from a large corneal flap. But with myself, as with many others, the present tendency is to do iridectomy less and less frequently, and it is probable that the cases in which it is either necessary or desirable will ultimately be found to be few and far between.

KIDNEY DISEASE WITH CARDIAC COMPLICATIONS, WITH EXHIBITION OF SPECIMENS.*

JOSEPH M. PATTON, M.D.,
CHICAGO, ILL.

The patient, male, was 40 years old. He had been living in a Western city for eight or ten years, and his family during this period had had no track or knew anything about him until he came to this city in the care of an escort, coming from Ogden. He told me he has suffered at various times during the past three or four years from what is termed in the Western country "mountain fever," and that he had had a great deal of trouble with his liver. He had worked at printing, being a foreman in some large printing establishment, leaving that and going out into the open air and doing all kinds of hard work in the endeavor to stimulate himself to a better physical condition, and finally, after being told by his physicians that he had Bright's disease, and would live but a short time, he accepted their advice and returned to Chicago. The man who came with him did not expect him to live until he reached Chicago. I saw him twelve hours after his arrival and found him sitting in a chair suffering from violent dyspnœa, unable either to lie down, to stand or walk. The lower portion of the lungs œdematous; the lower extremities were swollen until the skin over the tibialis anticus in the left limb had bursted and was running freely with water. The liver was greatly enlarged from passive congestion until it filled three quarters of the abdominal cavity; his stomach was somewhat congested, and he was suffering a good deal of distress in this organ. He had no temperature; his pulse was rapid and irregular; the heart was in a very arhythmic condition, but was beating with a good deal of force, which was not at all commensurate with the condition of the circulation in the arterial tract. Examination of the heart revealed a very much enlarged condition of the organ, which was due partly to hypertrophy, and more so to dilatation of the left ventricle, the line of dulness extending two inches to the left of the nipple and down to the seventh intercostal space. No murmurs to be heard at the aortic valve. Of course, it would be a question in a condition of this kind as to whether or not a mitral regurgitant murmur would be present. Owing to such an extensive dilatation of the left ventricular cavity, you might have a mitral regurgitant murmur which would escape detection. The patient improved in the course of a week under treatment, which was, infusion of digitalis, morphine and nitroglycerine with diuretics, the nitroglycerine with digitalis to counteract the tendency of digitalis to contract the arterial vessels, and thus relieve the distressing condition that might be caused in this way. There was little effect on the kidneys by this treatment. He was passing about four or five ounces of urine every twenty-four hours; specific gravity, about 1023, heavily loaded with albumen; few epithelia from the bladder and pelvis of the kidney, but no casts. He was given calomel according to the method of German physicians, when administering it as a diuretic in cardiac diseases, that is, giving three grains three times a day until six doses are taken, then wait. This was taken in this way, and at the end of the second day the kidneys began to act freely, and after the third or fourth day he passed four quarts of urine in twenty-four hours. Inside of four days the œdema was out of the lungs; the liver had assumed its natural proportion, swelling of extremities disappeared, and the patient was feeling comfortable. Treatment directed toward his heart, and to improve his general condition, was continued. He did not gain in strength, and had periodical relapses into his former condition, with return of the œdema of the extremities, enlargement of the liver and extension of the dilatation of the heart, with scanty secretion of urine. These attacks were preceded by distress in the stomach and symptoms of biliary

*Read before Chicago Pathological Society, October, 1892.

colic; they were relieved only by the administration of the calomel. These attacks were preceded by marked arhythmia of the heart and accompanied also by marked Cheyne-Stokes respiration. During the early part of my attendance he was seen by Dr. J. D. Skeer in consultation, who suggested contracted kidney as the cause of the cardiac condition, and while disease of the kidneys was the only reasonable explanation, the efficient action of these organs obtained under treatment, made it rather uncertain. He suffered three or four relapses, and was under treatment nine months, and finally died from failure of the right ventricle, there being non-synchronous contraction of the ventricles prior to death, and at the time of death there was very little œdema, only such as one would naturally expect. The kidneys were acting fairly well until two days prior to death, when they gradually ceased their action as would be expected from a failing heart. The Cheyne-Stokes breathing was only present during the attacks above alluded to, and was not present for three weeks prior to death.

The autopsy was made with the assistance of Drs. J. D. Skeer and Geo. H. Cleveland sixteen hours after death, and showed that the body was fairly well nourished.

Autopsy sixteen hours after death: Body fairly well nourished, *rigor mortis* not well marked. There was no fluid in the pericardial sac, the left pleural cavity contained about a quart of clear fluid, the right pleural cavity was empty. A firm band of old adhesions about two inches wide connected the chest wall and middle of right lung. The lungs were much congested, and the seat of brown induration almost black in places, very firm and indurated in spots, as from connective tissue induration subsequent to hæmorrhagic infection, or catarrhal pneumonia; lungs œdematous in lower portions, especially the left.

Heart weighed 22½ oz., hypertrophy of all muscular structures of heart, and dilatation of all cavities, granulo-fatty degeneration of muscular tissue. Mitral ring stretched, papillary muscles much thickened, and retracted, preventing closure or mitral valves. Mitral valves slightly thickened. Aortic and pulmonic valves were healthy. Tricuspid opening slightly stretched. A long firm white thrombus in right venticle stretched back into right auricle, and required some force to detach it from papillary muscles; a small softer clot in left ventricle; both ventricles and right auricle were filled with clotted blood.

Liver enlarged, firm and seat of fatty degeneration and moderate cardiac cirrhosis. Gall bladder distended with dark green bile, ducts patent. Stomach congested, slightly dilated. Pancreas enlarged, congested and very hard.

Right kidney weighed 8½ oz., of normal consistency and appearance, capsule non-adherent; ureter larger than normal. Left kidney weighed 1½ oz., capsule very much increased in thickness, impossible to separate it without tearing kidney tissue. Kidney itself very hard, contained in cortical portion several small cysts filled with an amber colored fluid, ureter very small.

Dr. Skeer questioned the patient one morning as to his ever having had syphilis, and he said yes; but in talking to him afterwards it was evident that he misunderstood the doctor; that he understood him to mean any kind of venereal disease. He had had gonorrhœa and admitted it, but he denied ever having syphilis.

An examination of the specimen shows that the aortic valves are intact. It was opened between the junction of the two cusps of the valve, so that they are not destroyed. The mitral ring is considerably stretched and the valves are retracted, and it was rather difficult to state whether they have been the seat of more or less inflammation. Of course, they are thickened and retracted, but that might be due to the thickening and retraction of the ring and papillary muscles. The wall is much thickened, and the cavities are all dilated. The right kidney is of no particular interest except that it is enlarged. In the left kidney there were several cysts. They were not opened, and they have dried up a good deal.

These cysts are here found in their usual situation, that is in the cortical portion, especially near its surface. This kidney is a marked example of the small red kidney—chronic interstitial nephritis, the marked thickening of the capsule, and the direct connection of the capsular connective tissue with that of the cortical portion is very marked. The decrease in the cortical substance, especially that between the pyramids, is more marked than is usually found; the pyramids themselves have diminished considerably in

size as the result of connective tissue increase in the medullary portion, a somewhat infrequent occurrence. It is possible that there was entire functional inability of this organ for a long time, which might explain the absence of the usual evidences of disease found in the urine.

A point of interest in this case was the diagnosis. It was evident the man had an hypertrophied and dilated heart, but it was not evident as to what that was due. There evidently had been hypertrophy of the right ventricle which had taken considerable time in developing, and of course there must have been a cause for that. The aortic valves were intact; there was no regurgitation or stenosis; there was no apparent sclerosis of the arteries; there was nothing that one could find which would explain the enlargement of the heart, unless it might be contracted kidney. After administering remedies to him and finding the secretion of urine was so free, and that it went on with the improvement of the circulation for months without any special trouble, there was no room to suspect that there was anything wrong with his kidneys. There was no evidence of any kidney disease by examining the urine, except occasionally traces of albumen, which will show in any case of congestion of the kidneys from deficient circulation.

Another point: It is evident that the enlargement of the heart would come under that head designated by Fraentzel as idiopathic enlargement of the heart. It is due to some cause extraneous to the heart, obstruction to the circulation in the kidney, or some other agent; excessive consumption of food and drink, for instance, might cause idiopathic enlargement of the heart by increasing vascular tension. This case might be classed as one of idiopathic enlargement. How long this condition of the kidney might have been developing it is hard to say; but no doubt it was excited years prior to the man's death, or it may have developed in early life. How long a man would live with one kidney; how long it would take to produce that amount of enlargement of the heart which we see in this case and its consequent failure are very interesting questions. It is possible the trouble with the kidney might have begun in early life. It is also possible that it might have been a matter of only five or six years back. Certainly, it would take five or six years for a heart to develop the condition of hypertrophy developed in this case, with the consequent degeneration and dilatation. In aortic stenosis, which gives us the form of hypertrophy more nearly allied to this than anything we can think of, we might have a heart running for a period of thirty or forty years before it reached the condition of degeneration and dilatation which obtained in this man. The compensation effected by the right kidney is an interesting fact, as it must have done double duty for a long time, and while under my observation I think the entire function devolved on this one organ. In no other way can I explain the lack of evidence of kidney disease usually obtained by examination of the urine. I do not think the left kidney excreted any urine during the nine months in which the case was under my observation.

This case is also instructive in showing how much may be done in prolonging life in these cases under very adverse conditions.

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, December 9, 1891.

THE PRESIDENT, JOHN B. ROBERTS, M. D., IN THE CHAIR.

DR. A. B. KIRKPATRICK read a paper on "The Medical Treatment of Appendicitis" (see page 84)

DISCUSSION.

DR. CHARLES P. NOBLE: I arrived a little late, but I understand that reference has been made to a case which I saw in consultation. It was undoubtedly a case of intussusception. The case illustrates the fact that occasionally a patient will recover from this condition by sloughing of the bowel. It also illustrates the difficulties of diagnosis of the cause of peritonitis when the surgeon is called in late. The boy had been sick for nearly a week when I saw him. There was evident obstruction of the bowels, with fæcal vomiting, and there was undoubtedly well-marked peritonitis; and the history indicated that the peritonitis had arisen in the right iliac region. The question was whether the case was one of appendicitis or one of intussusception. The physicians in charge were inclined

to regard it as a case of appendicitis, and and I agreed with them, as the symptoms of invagination were absent; yet I must say that I felt that intussusception through the anus, but it was so high that my finger barely touched it, and I was not sure that it was not a fold in the bowel.

It is fortunate for that boy that our advice was not followed; for if he had gone to the hospital and been operated on in the condition that he was in, the chances would have been much in favor of a fatal result. At the same time, I think that it would be exceedingly dangerous to argue from such an exceptional case any general rule of practice. The recoveries in this class of cases, where the bowel is allowed to slough away, I think, does not exceed two or three per cent.

DR. T. S. K. MORTON: The first case reported is of interest from the fact that it was a well-marked case of intussusception, and yet the classical symptoms of this condition were absent. There was no passage of blood with the stools, and there was absence of rectal irritation. The condition was about as marked as it possibly could be, and yet a diagnosis apparently was not possible.

I think that the position of the surgeon in regard to appendicitis is often misunderstood, especially by the mere medical practitioner. So far as I have seen, the surgeon is not anxious to operate, and the cases not operated on vastly exceed those in which operation is done.

With reference to the constipation of appendicitis, I think that where the bowel cannot be moved by any procedure either from above or below, the case is exceedingly unfavorable for recovery, with or without operation; whereas, if the bowels can be moved, the prognosis becomes much more favorable. If, after the bowels are freely moved, the symptoms subside, I look upon the case as one that will probably not require operation at that time. If, however, there is only temporary amelioration of the symptoms, or none at all, the case is one for operation.

DR. WILLIAM S. STEWART: I am not satisfied that the cases reported should be regarded as true cases of appendicitis. There was evidently impaction of the ascending colon in all five cases, due, no doubt, to inflammatory action; but it is evident that in these cases operation was not justifiable. First remove the impaction, and then if there is an aggravation of the symptoms, the inflammation becoming more marked, it is then time to consider the propriety of surgical treatment.

DR. KIRKPATRICK: I am sorry that no one has attempted to throw light upon the subsequent course of the first case reported, as to whether the typhoid condition which followed was due to the inflammatory trouble or was a true typhoid fever.

I should not like to be considered, in this paper as not favoring operation in proper cases. The point which I wish to make is, that I fear in some cases the physician does not take the proper means to open the bowels before resorting to operation. I fully agree with what has been said as to the unfavorable prognosis of operation in cases where the bowels cannot be moved at all.

I think the criticism of (I believe) Dr. William S. Stewart hardly just or tenable. I understood him to say that he did not believe the cases reported were true cases of appendicitis—only obstruction of the bowel. I took particular care not to report in detail the cases in which I relied upon myself for diagnosis, but based my treatment upon the diagnoses of Drs. Keen, Noble, Wheeler, Dripps, and David Stewart.

I think we must admit that they are careful, skilful men, and capable of making a correct diagnosis.

THE STREAM OF IMMIGRATION.

Reports to the State Board of Health, from the Sanitary Inspector in charge of the inspection of immigration to exclude dangerous diseases, at Port Huron, for the two weeks ending December 19, 1891, show opportunities for the introduction of such diseases, by immigrants from many different countries, passing through Michigan to States beyond. The numbers and nationalities of the immigrants inspected were as follows:—6 Arabs (from Jerusalem), 14 Austrians, 8 Belgians, 27 Bohemians, 49 Danes, 84 English and Scotch, 1 Finlander, 34 French, 97 French Canadians, 204 Germans, 20 Hollanders, 10 Hungarians, 6 Irish, 101 Italians, 209 Norwegians and Swedes, 66 Poles, 12 Russians, 36 Russian Jews, 2 Servians and 5 Swiss.

The destinations of these immigrants were mainly "Chicago and the Northwest." A few of them went to Saginaw. All the French Canadians were from the province of Quebec.

SELECTED FORMULÆ.

CHOLELITHIASIS.

Dr. Huchard (*Centralblatt für d. ges. Therapie*, No. 8, 1891) recommends:

℞ Natrii benzoici, } ää gm. v.
Natrii salicyl, }
Pulv. rad. rhei, }
Pulv. nuc. vomic., gm v.

Sufficient for twenty capsules. One capsule at eve y meal.

ODORLESS IODOFORM SALVE.

The following (*Centralblatt für d. ges. Therapie*, No. 8, 1891) is suggested:

℞ Creolin.....grammes j.
Iodoform..... " ij.
Vaselin..... " xxv.

BEJEAN'S GOUT CURE.

According to the *Pharmaceutische Centralhalle*, this remedy has the following composition:

℞ Oil of wintergreen.....parts v.
Extract of gentian..... " v.
Iodide of potassium..... " iv.
Sodium salicylate..... " iv.
Alcohol..... " xx.
Water..... " lxxx.
M.

LAXATIVE.

℞ Ext Colocynth Co.....ʒ j.
Ext. Hyoscyam.
Aloes Pulv. Soc.....ää grains x.
Ext. Nucis Vomicæ..... " iij.
Podophylli
Ipecac.....ää " j.

Make twelve pills. Sig. One at bed-time.

—*Weekly Med. Rev.*

FISSURES OF THE TONGUE.

The following (*Lo Sperimentale*, No. 14, 1891) is recommended:

℞ Acid carbolic.....grammes 2.5,
Tinct. iodii } .....ää " 12.5.
Glycerine }

INFANTILE INSOMNIA.

M. Huchard gives the following:

℞ Urethane..... gramme 0.20
Aquæ tiliæ destillatæ.
Aquæ aurantii flavæ.
Syrupi simplicis.....ää grammes 20 00.

M. Sig. A dessertspoonful every two hours in a wineglassful of water.

—*Journal des Sciences Médicales de Lille*, August 14, 1891, p. 166.

FOR PELADA.

Water of ammonia.....1.
Rum.....3.
Decoction of walnut leaves.....60 to 80.

Use as a lotion.

TO PREVENT THE PITTING OF SMALL-POX VESICLES.

Dr. Bertrand (*Gaceta Sanitaria de Barcelona*, July, 1891) recommends:

℞ Acid boric.....grammes 4.
Amid. glycerolat..... " 80.

Apply immediately after the eruption appears.

TOPICAL APPLICATION IN DIPHTHERIA.

Dr. Ernest Timmermann writes in *The Medical News* that he has used with signal success the following formula as a topical application to the throat in the treatment of malignant diphtheria:

℞ Acid sulphurosi.....f ℥ss.
Liquor potassæ.....gtt xl.
Aquæ calcis.....ad f ℥iv.

Mix, filter; keep well corked in a cool place. To be applied topically to the th oat by means of a sponge, probably every hour or two.

CONSTIPATION IN INFANTS.

Calcined magnesia,
Powd. rhubarb,
Oleosaccharum of anise, aa 5 parts.

Administer a pinch of the above three times a day in the constipation of children of 1 to 2 years old; if the infant is only s ome weeks old, make both the rhubarb and magnesia 3 instead of 5 parts. [The oleosaccharum is made by intimately mixing one or two drams of the essential oil of anise with one ounce of finely powdered sugar.]

GONORRHŒA.

Dr. Netzetzky (*La Independencia Medica*, No. 42, 1891) uses the following injection in gonorrhœa:

℞ Balsam copaibæ..... grammes 4.
Vitell. ovi,..... No. 1.
Aq. destillat..... grammes 180.
f. emuls. et adde:
Ext. belladon. }
Zinci sulfat. } .....ää dgms. 5.
Aq. laurocerat..... dgms. 4.

Inject into the urethra four times a day.

Of service in all forms of gonorrhœa.

FOR RHEUMATISM AND LUMBAGO.

Hollister gives the following in doses of 1 teaspoonful three or four times a day:

℞ Potassium iodide,.....grammes 15.
Potassium bromide..... " 15.
Tincture of colchicum seed... " 30.
Syrup of bitter orange-peel... " 50.
Distilled water..... " 150.

M. Sig The dose should be augmented u til the bowels are moved.

—*National Druggist*, September 15, 1891.

ASTRINGENT GARGLES.

The *American Journal of Pharmacy* gives the following formula for Goddard's astringent gargle:

Fol. rosæ rub.....2 dr.
Aquæ bullientis.....5 oz.
Acidi sulphurici dil.....½ dr.

Infuse, when cold strain, and add

Mel. despumati.....1 oz.
Acidi tannici.....2 scr.
Aluminis.....2 dr.
Spir. vini rectifi ati }
Aquæ ro-æ } .....ää 6 oz.

M.

Another gargle is as follows:

Red rose petals.....3 dr.
Pom egranate rind.....4 dr.
Boiling water.....6 oz.

Infuse, strain, and add

Alum.....2 dr.
Clarified honey.....1 oz.

Mix, filter.

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LEADING ARTICLE.

NEURASTHENIA, AND ITS RELATIONS TO MENTAL DISEASES.

No subject within the entire range of medical science should demand more careful study at the present day than the protean-symptom-group we call neurasthenia. Apart from the fact that in the eastern and northern parts of this country it is probably the most prevalent of all diseases, it should also be remembered that it has been called the "American disease," by Beard, who, in 1868, described the conditions of nervous exhaustion under this collective name, and who also wrote that its development was directly due to "modern civilization."

We all have realized how frightfully common it is, and know that its expression is more varied than even the manifestations of "*malaria*," and surely no other disease exists which is of more practical importance to the general practitioner, for it rests almost solely with him whether neurasthenia shall "increase in the land." It is the general practitioner, the family doctor, who has the rarest opportunities for studying the beginning of these symptoms of lowered nervous tone, and who, therefore, must be most practically interested in their prophylactic and curative treatment, as well as in understanding, as far as our knowledge makes this possible, their real nature or *pathology*.

Is it too much to say that the treatment of neurasthenia requires more experience, judgment and fine tact than does that of any other known disease? If this is so, and in our opinion it is at least very nearly so, certain accurate knowledge is essential to their proper understanding of any given case, for only upon correct ideas as to the real state of the nervous system exhibiting these varied symptoms can a useful therapeusis be based. It is, therefore, most desirable that every physician should, as far as possible, appreciate fully the meaning of every symptom

which may herald neurasthenia, so that in a very large proportion of cases its dangers can be averted. We fear that sometimes, we hope not often, deplorable results follow, because the physician in charge of the case disregarded, overlooked or neglected to give proper weight to early neurasthenic symptoms.

So far, we have considered simple neurasthenia, or the symptoms of nervous exhaustion, but greater interest still attaches to this subject when we come to consider the relations which nerve exhaustion bears to definite diseases of the mind. Are melancholia and mania, and other common varieties of insanity frequent sequences of neurasthenia? What proportion of neurasthenics become insane? What proportion of the insane first suffered from neurasthenia? Does insanity become more prevalent in proportion to the prevalence of neurasthenia? These and many other questions naturally occur to us.

Having endeavored to indicate a few of the reasons why neurasthenia should be of special interest to the general practitioner, it is our purpose to briefly sketch the subject as its literature reveals it to-day. Space will not permit of more than a brief synopsis of some of the latest and most important thoughts.

Among the most valuable recent contributions to this subject, perhaps that of Dr. Edward Cowles (The Shattuck Lecture. Medical Communications of the *Massachusetts Medical Society*, 1891) can be justly called the most thorough and complete, especially in more clearly than hitherto defining the relations which neurasthenia has with unmistakable mental diseases. The author of this valuable paper has had, from his wide experience as chief of the McLean Asylum at Somerville, Mass., the most ample opportunities for the careful study of this affection, and his large experience and scholarly attainments add weight to his words. He regards neurasthenia as a real pathological condition of the nerve centres due *primarily* to overstrain, fatigue, etc.; *secondarily* to the exhaustion of other diseases; and *hereditarily* to various exciting causes acting upon unstable cell nutrition. The underlying cause of the lowered nutritive activity of the cell protoplasm he mainly regards as an auto-intoxication from waste toxic products, the result of over-functional work, or of disorders of the eliminating functions of the body, or of unstable metabolic action from bad heredity. In support of these views of the etiology and pathology of nerve exhaustion, the author goes exhaustively into the chemistry and physiology of the nervous mechanism, and also adduces all the recent proof which goes to show that auto-intoxication of the organism is more than probable in the conditions under consideration. This part of his work he sums up as follows: "The study of the general organic mechanism, so far, shows that it may be conceived as made up of many minor mechanisms which may be studied as represented by their activities. Some general truths have been reached in regard to all of them as to their structure, their co-ordinations, and the results of their functional exercise. These conclusions are in support of my first proposition, to the effect that when the mechanism is put into use, physiological activity and toxicity always occur together, and that the condition thus jointly produced has its first expression in normal fatigue. Moreover, it appears that in pathological or nervous exhaustion, which constitutes neurasthenia, there results a condition of "excessive irritability and weakness" of the nervous system. There is also, in acute neurasthenia, always an increased toxicity, by its accumulation in fatigued areas, and often by general fatigue and auto-intoxication through disordered nutritional processes,"

Having thus concluded regarding the pathology of nerve exhaustion, he next demonstrates that there are mental symptoms by which we may know the degree

of nervous fatigue and "auto-intoxication of the nerve and muscle elements," as a "guide for diagnosis, prophylaxis and treatment." Dr. Cowles says: "My observations in the treatment of insanity have given me the conviction that in the commonly occurring and typical forms of mental disorder, which are of a functional and curable character, nervous exhaustion always plays an important part, both in the attending conditions and the causation." He strongly insists that the mental symptoms of neurasthenia being the earliest, are far more important, and better guides to treatment than the purely physical ones, and his treatment is based upon the recognition of the state of the nervous system from a careful study of the mentality of the patient. His treatment of the objective symptoms includes elimination, nutrition, rest, exercise, massage and the promotion of sleep.

Dr. Dana, of New York, has recently given us a good definition of neurasthenia. (Neurasthenia. *The Post Graduate*, January, 1891.) He says: "Neurasthenia is a morbid condition of the nervous system, whose underlying characteristics are excessive irritability and weakness; a condition in which the nutrition of the nerve cell is primarily at fault."

It is now a well recognized fact that neurasthenia may confine itself to a limited area of the nervous system, hence we have the subdivisions of cerebrasthenia and spinal neurasthenia, with their legions of symptoms, chiefly subjective. Among the objective signs of the neurasthenic condition, Dr. B. Sachs lays stress upon the following: tremor of the face, tongue and hands, and exaggeration of the knee-jerk. (Clinical Lectures. *International Clinics*, April, 1891.)

There can be no doubt from the mass of available evidence that neurasthenia and actual insanity possess, in general terms, the same etiology, and that the former may, and very commonly does, merge gradually into the latter. It is a nice question, sometimes, to decide between ordinary acute melancholia and the mental depression which accompanies certain forms of neurasthenia, and probably the formation of delusions of persecution, or that the patient is being punished for imaginary crimes, constitutes the most really practical guide towards a decision in such cases.

The treatment of these neurasthenic states is certainly most important in view of their natural tendency towards grave mental disease. It will often prove the prophylactic treatment of insanity. The success of any treatment depends mainly upon the recognition of the state of the nerves' mechanism, as shown, first, by the mental symptoms, and secondly, by the subjective sensations and objective signs which the patient presents. Routine treatment of these cases (with strychnine, phosphorus and the various tonics, the rest cure, massage and electricity, foreign travel, etc.) is to be deprecated, for only will the needs of each patient be ascertained after a careful study of the type and degree of the nervous exhaustion based upon a thorough understanding of the real state of the nerve elements, as shown by the mental symptoms, together with the condition of bodily nutrition; and, in all cases, it is our duty to endeavor to find out exactly what is interfering with nutrition. No subject within the scope of medicine is at times more perplexing than the treatment of neurasthenia, nor does any other disease offer greater inducements for the proper solution of the problem of treatment than nervous exhaustion.

The practical lesson which the recent researches concerning the essential pathology of nerve exhaustion should teach, seems to be that we should give increased attention to the *mentality* of neurasthenics, since it is the earliest and most valuable guide, according to high authorities, to a correct appreciation of the nature and degree of the nervous malady; and, also, that the treatment of such states must be varied to suit individual

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cases, and the existing conditions of digestion, assimilation, cellular metabolism, elimination and excretion of toxic waste products.

The intimate relation of nervous exhaustion to insanity, on the one hand, and to neurasthenic symptoms on the other, plainly indicates that in all probability they are simply links in one pathological chain of events, and that many cases of insanity spring directly from neurasthenic soil, whether hereditary or acquired. Through the recent brilliant results obtained by the experimental chemist and physiologist, some of the shadows which obscure the pathology of neurasthenia have been cleared away, and enough is positively known to indicate that there is for nervous exhaustion always a definite pathological anatomy, and that this consists of certain changes in the nerve cells, due to the effects of the toxic products resulting from their pathological activity.

CORRESPONDENCE.

PROMISCUOUS SPAYING OF WOMEN.

DR. NOBLE'S REPLY TO DR. TODD.

EDITOR MEDICAL AND SURGICAL REPORTER:—It is much to be regretted that Dr. Todd in his communication in the last issue of the REPORTER has followed the lines of his previous letter. He reiterates his statements, but fails to furnish any evidence in support of them. He is silent even with reference to the real nature of the four cases of removal of the uterine appendages which have come under his own notice. The only new point presented is that a woman, the mother of four children (whether with healthy or diseased ovaries the Doctor does not state, although presumably they are healthy), has consulted him with reference to having her ovaries removed in order to avoid further pregnancies, and that in spite of his advice to the contrary, she persists in her intention, and expects to get some surgeon to do her bidding, because she can pay for it. Also, that the woman knows several other women who have "gone through the operation." Nothing is said as to the nature of the indication in these cases, whether tumor, abscess, or chronic salpingitis. It is not stated that any one removed this woman's healthy (?) ovaries, or agreed to remove them, but simply that the woman intended to have it done. Yet the Doctor says that this fact proves conclusively to him that there are certain parties who follow the profession of the promiscuous spaying of women! It is scarcely necessary to point out that the evidence required to convince him is not great.

Dr. Todd says that his criticism applies to "a certain class of ambitious young surgeons." Here again he gives no reason for stating that ambitious young surgeons do other than justifiable operations; hence the statement does not require special comment.

As was stated in my last communication, my object in writing it was not to criticise Dr. Todd, but to protest against the baseless assumption of not a few members of the profession that healthy ovaries are being removed by operating gynæcologists, and further, to protest against the present fashion of making loose statements concerning this subject. This whole matter is a very serious one for the profession and for sick women; and every candid and fair man must desire that it shall be approached, not from the standpoint of mere opinion, which may be only prejudice, but from the judicial or scientific point of view, in which truth is the only object, so that a conclusion can be reached upon evidence which is satisfactory to every mind.

It seems curious that this subject now should agitate the minds of many members of the profession in general, when it has been settled practically by gynæcologists themselves. Some years ago, following the lead, but not the moderate practice, of Battey, surgeons removed many healthy or slightly diseased ovaries for various mental and nervous diseases, supposed to be connected with menstruation. The results obtained, as might have been expected, were such as to cause the older gynæcologists to operate on such cases only after the failure of all simpler measures, and then only under strict limitations. This experience of the older men has been of immense advantage to younger men in enabling them to escape this error in practice. Besides, our knowledge, or rather ap-

preciation, of the pathology of pelvic inflammation has undergone a complete revolution within the past ten years, which has been of the greatest value in giving gynæcologists to-day a rational basis for their therapeutics.

Had the letter of Dr. Todd, and similar communications, been written ten, or even five, years ago, they would have assisted in bringing about the principles of practice which the good sense of gynæcologists has caused them to adopt.

The fact that a woman consulted Dr. Todd with the object of having the ovaries removed to escape future pregnancies is worthy of careful consideration. It seems to me that an operation done for such a purpose would be malpractice. The only ground on which it could be justified would be in case of serious pelvic deformity, making delivery *per vias naturales* dangerous or impossible. But the modern Cæsarean section, done at or just before the beginning of labor by an expert surgeon, is so safe that even here the indication is very questionable.

Very respectfully yours,

CHARLES P. NOBLE, M. D.

NON-MENSTRUATING PLURIPARA.

EDITOR OF THE MEDICAL AND SURGICAL REPORTER:—On page 834 of REPORTER, of volume lxv, Dr. Marion Dunagan quotes a case of a colored woman who had never menstruated, who was the mother of ten children. Will you allow me to report the following: In 1878, I attended a Mrs. D—— in her sixth confinement. She stated to me, and her husband confirmed the statement, that she had never menstruated and never wore a guard. She sent for me a month before delivery, believing herself at full term, stating that she "did not know for a certainty when she was at full term," owing to the fact that the usual data were not present to date from. Afterward she gave me in a vial two ova, unruptured, which she had found on her night dress.

I believe Dr. Dunagan is right as to menstruation and ovulation not occurring at the same time, and that neither are dependent on the other. I have a record of eleven cases where connection was not had with the woman until fourteen or fifteen days after menstruation and for a month prior to it, and still conception took place. In two other cases women have shown me the perfect ova which have been thrown off sixteen or twenty days after menstruation—they not knowing what "the little pellets" were.

I have no doubt but that numbers of physicians have met such cases but thought them of not sufficient importance to report.

Incidentally, I may state that I know also of a case where a lady of eighty-three who menstruated regularly every two months, the same as when she was a young woman. She had never menstruated every month as is usual.

BEN. H. BRODNAX, M. D.
Brodnax, La.

DR. E. W. CAMPBELL'S ARTICLE ON "ELEMENTS OF THOROUGH DIAGNOSIS."

EDITOR OF THE MEDICAL AND SURGICAL REPORTER:—Dr. E. W. Campbell in his article in the Dec. 26th issue of the REPORTER, entitled, "Elements of Thorough Diagnosis," affords a remarkable example of the fact that certain impressions transmitted by the optic nerve, under certain conditions, can so influence the brain as to make it reproduce the same impressions on some other occasion with the belief that they are original. The case above cited is remarkable in that the ideas of the article and the language by which they are expressed are identical with part of the introduction to Da Costa's "Medical Diagnosis."

I feel obliged to the author of the article for placing in my hands so convenient a copy of the instructions of the great Da Costa.

Respectfully,

J. F. STEWART, M. D.,
Griffen, Ga.

CONSTIPATION.

In a lecture on Constipation, the eminent authority on therapeutics, Prof. Dujardin Beaumetz, described Villacabras as the most highly concentrated purgative water known. Its usefulness seems to be by no means limited to the field which is occupied by other waters. Its action is not succeeded by the annoying constipation that usually follows the administration of other purgative waters. An ordinary wine glass of Villacabras, taken before breakfast, produces a soothing effect upon the bowels and results in a natural movement within two or three hours.

BOOK REVIEWS.

THE COMPARATIVE ANATOMY OF THE DOMESTICATED ANIMALS. By A. CHAVEAU, M. D., LL. D. Second English Edition. Translated and Edited by GEORGE FLEMING, C. B., LL. D., F. R. C. V. S. 8vo, pp. 1084, 585 illus. New York: D. Appleton & Co. 1891.

This edition is a translation of the fourth French edition, issued last year. In the present volume, numerous alterations, additions and illustrations have been made in order to render it fully up to the requirements of a text-book and standard work of reference. The chief additions are on the anatomy of the ass, mule, rabbit and camel, and one hundred and thirty new illustrations. The pages have been enlarged, and the letter-press substantially improved. There is also a copious index, which is not found in the French edition.

Chaveau's work has long since attained a position second to none in the field it is intended to cover. In this new edition, the student of veterinary and comparative anatomy will find a work accurately written, fully illustrated and generally admirably adapted to his wants.

EVIDENCES OF THE COMMUNICABILITY OF CONSUMPTION. By G. A. HERON, M. D. (Glas.), Fellow of the Royal College of Physicians of London; Physician to the City of London Hospital for Diseases of the Chest. 8vo, pp. 163. London and New York: Longmans, Green & Co. 1890.

During the winter of 1889, Dr. Heron delivered two lectures at the London Hospital for Diseases of the Chest, on "The Question of the Communicability of Consumption." These lectures met with such approval, and were of such value for reference, that he has been induced to put them in book form.

The death-rate from tuberculosis is so appalling that anyone offering facts which will serve to diminish it, must be looked upon as a public benefactor. Certainly the lectures before us entitle the author to such a recognition.

In the book, the wording of the original lectures has been somewhat modified, additions have been made, but the colloquial style of the lectures preserved. We find chapters on the researches of Koch concerning tuberculosis, the evidences of the connection of specific bacteria with the disease, the haunts of the bacilli, the evidences showing the communicability of consumption, milk and meat as sources of infection, prophylaxis, etc. There is also a valuable appendix by Dr. Frosch, of Berlin, prepared under the direction of Professor Robert Koch, giving references to recent contributions on the infectiousness and contagiousness of this disease.

Dr. Heron is a firm believer in the bacteriological origin and contagiousness of consumption, and his facts have been presented so clearly and convincingly that one cannot read his work without feeling that he has built upon an indestructible basis. The book is of such a character as will interest every one having the welfare of the community at heart, and who desires to prevent the spread and continuance of this terrible scourge of mankind.

PERISCOPE.

THERAPEUTICS.

THE HYPNOTIC ACTION OF THE ANTIPYRETICS.

In the *Deutsche Medizinal Zeitung* for June 5, 1891, Professor Bernheim calls attention to the great similarity in action of the so-called antipyretics,—quinine, salicylic acid, antipyrin, antifebrin, phenacetin, etc.,—not only in their antithermic, but also in their hypnotic action. When the favorable action of salicylic acid in rheumatism was first observed, it was designated as a specific for this affection, but experience has taught that the other antithermic remedies produce a favorable effect likewise in the same manner,—that is, they diminish articular pain without influencing the course of morbid processes itself. According to Bernheim, the connection between antithermic and analgesic action is the following: Fever originates through the absorption into the blood of pyrogenic substances, which act as stimulants to the heat-centres, and reduction of temperature can be produced by the elimination of these pyrogenic substances or by direct action on the heat-centre. If the antithermics were capable of actually destroying the ferments in the blood they would then act as abortive agents. This is, however, not the case, according to Bernheim, who will not even admit a specific action for quinine in the case of malaria, since he maintains that the

action of this substance on the disease is merely due to its antithermic properties, which are possessed in almost equal degree by the other antithermics. He concludes that the different antipyretics, quinine and salicylic acid included, only produce their action either through antithermic influence on the cerebral centre, and that a distinct antipyretic action within the organism has never been demonstrated. He likewise maintains that the analgesic action is in close connection with the antithermic action, and likewise is produced by influence of nerve-centres, which are probably included in the gray substance of the cortex. In fact, Bernheim states that by the æsthesiometer he has succeeded in producing marked reduction in the sensibility of the skin after the exhibition of quinine. According to this, therefore, the antipyretics are only indicated in fevers in the height of temperature, or when they are to be employed for the reduction of abnormally increased sensibility.

CORNUTIN AS A HÆMOSTATIC IN HÆMORRHAGES FROM THE BLADDER AND FEMALE GENITALS.

Dr. Wilh. A. Meissels (*Wiener med. Presse*, No. 42, 1891) recommends cornutin muriate or citrate as an efficacious hæmostatic in vesical and uterine hæmorrhages. It may be administered subcutaneously or by the mouth. It is equally efficacious in males as well as in females. The dose employed was one to one and a half centigrammes (one-eighth to one-fourth of a grain) a day. It is easily taken and supported by the stomach.

CHLORIDE OF AMMONIUM IN INFLUENZA.

According to the Paris correspondent of the *Lancet*, at a recent meeting of the Academy of Medicine, M. Marrotte advocated the use of chloride of ammonium in the treatment of epidemic influenza in preference to sulphate of quinine, as urged by M. Gellié, of Bordeaux, in his recent paper read before the academy. M. Marrotte speaks very highly of the results obtained by chloride of ammonium, the advantages of which over quinine he claims to be that it is much cheaper, more rapid in its action, and brings about a more complete and definite cure. It is more especially in those forms of the disease which are complicated by pulmonary congestion or inflammation that chloride of ammonium will be found serviceable. From 50 to 80 grains may be given in twenty-four hours in the form of 8-grain powders, which may be conveniently concealed in a wafer. As the treatment of influenza is, unfortunately, like many other therapeutic problems, a very open question, perhaps some of your readers on your own side of the channel, whose opportunities just now are only too unlimited, might put the drug to the test and record their experience.

HYDROTHERAPY IN THE TREATMENT OF DIPHTHERIA.

The whole body of the child from the neck down is enveloped in a Priessnitz pack. This is removed at the end of three hours and the whole body rubbed off with cool water. After this, the body is again enveloped in the Priessnitz pack from the neck to the hips. These packs are renewed about every fifteen minutes during the following hour or two.

This whole procedure repeated twice, so that the child lies in a constant sweat from six o'clock in the morning to twelve o'clock at night. To promote diaphoresis, elder-tea and cognac in sugar water are freely administered.

From midnight until six o'clock in the morning, the child is allowed to rest, only a small Priessnitz pack enveloping the neck. Internally, chlorate of potash (2 per cent.) is administered.

This treatment usually causes the membrane to disappear within from two to four days. The fever and the bad smell as a rule vanished on the second day. The more copious the perspiration, the more rapidly does the membrane loosen.

Out of 117 cases of diphtheria treated as above described, 14 died. Tracheotomy was required in 9. The time spent in the hospital varied from six to eight days for each case.

As a theoretical argument in favor of the sweat treatment, it may be stated that it augments pressure of the secretion in the mucous glands, thereby loosening the false membrane, which is especially held in place by the fibrin net sunk into these glands. Moreover, the stimulation of the lymphatic circulation promotes the elimination of the poisonous elements from the body.—*Blat. f. Klin. Hydroth.*

TREATMENT OF ANGINA PECTORIS BY COCAINE.

In a paper in the *Revue de Médicine*, the use of cocaine is strongly recommended in angina pectoris, in doses of one-half to one-third of a grain three or four times daily. He quotes four cases of this disease which were benefited greatly by this treatment. If the attacks do not cease immediately after taking the remedy, they completely yield to it, however, in about three days. Under its use the pulse becomes slower but fuller, and the quantity of the urine is augmented. The author refers to some observations previously made by him, which appeared to show that the inhalation of oxygen in this disease did much good; he therefore suggests that it should be tried in conjunction with the internal administration of cocaine.—*Med. Chronicle.*

A NEW TREATMENT OF GRANULAR CONJUNCTIVITIS.

The usual treatment of granular conjunctivitis consists in turning back the eyelids with the fingers, and then cauterizing the portion of the conjunctiva thus exposed with the sulphate of copper. This daily cauterization is extremely painful, and does not produce cure until after many weeks of severe suffering, and sometimes did not prevent absolute blindness.

At the meeting of the Académie de Médecine, held on August 4, 1891, Dr. Abadie described a method in the first place of completely everting the upper eyelid so as to expose the superior conjunctival cul-de-sac (*La France Médicale*, August 7, 1891). In the ordinary method of procedure it is this part of the superior cul-de-sac which is never exposed, and which is ordinarily a veritable focus of infection. To accomplish this complete inversion of the eyelids special instruments are necessary, and the patient must be chloroformed on account of the severe pain produced by this manœuvre. The eyelid is seized with forceps, and then rolled twice upon itself, or, in other words, rolled twice completely around the forceps, so as to completely expose the superior conjunctival cul-de-sac, which is then scarified freely with a bistoury, and a fairly hard tooth-brush is then dipped in a solution of corrosive sublimate, 1 to 500, and the raw surface vigorously brushed with this solution. This procedure is only required once, and then on subsequent days the eyelids are simply everted in the ordinary manner and the conjunctiva bathed with a solution of sublimate. The author states that this method of treatment may be applied to all cases, no matter what may be the existing degree of complication, and that its efficiency is the more marked the more serious is the case.

Dr. Guaita recommended first the use of sublimate in strong doses; Sattler insisted upon the efficiency of scarifications combined with scraping of the granular tissues; while Manolescu suggested the use of the brush; but the value of the procedure depends upon the employment together of all these procedures, which individually are inefficacious, and upon the complete exposure of the superior cul-de-sac.

LOCAL AND GENERAL ANÆSTHESIA.

Grandclément (*Lyon Médical*, Nov. 12, 1891) states that local anæsthesia usually suffices for the performance of minor operations, such as the relief of ingrowing nails, opening of abscesses, enucleation of small, superficial tumors, or to overcome the circumscribed pain of inflammation or of neuralgia. Several methods have been proposed for the purpose, but all are not equally valuable or secure.

1. *Anæsthesia by congelation with the aid of a refrigerant mixture of salt and ice* was the only method used twenty-five or thirty years ago; to-day it is almost abandoned. It is painful and time-consuming, and is best applicable to the extremities, the toes or fingers, which can be plunged into the mixture. Besides, ice cannot always and everywhere be obtained.

2. *Spraying with ether* originated with Richardson twenty-five years ago. It is superior to freezing with ice; it requires a special apparatus and protracted application, and is sometimes quite painful.

3. *Spraying with ethyl chloride* has recently been recommended. Ten grammes of ethyl chloride contained in a small glass bulb, terminating in a capillary tube that has been sealed in the flame of a lamp, are vaporized by the heat of the hand (ethyl chloride vaporizes at +10° C. (50° F.). A fine spray escapes when the tube is broken. In a short time the area sprayed presents a white appearance and a degree of anæsthesia sufficient to open deep abscesses and to perform other minor operations.

4. *Hypodermatic injections of cocaine* induce phenomena of profound intoxication in certain individuals, even when small doses are employed. Unpleasant symptoms sometimes follow the instillation of cocaine into the conjunctival sac. In the violent periorbital neuralgias that are provoked by certain affections of the eye, Grandclément has obtained good results from injections of cocaine and antipyrine in association. He believes that the œdema and vascular stasis resulting from the injection prevent too rapid absorption of the cocaine. The same end is attained by applying an Esmarch bandage to the part before the injection of cocaine is made. Grandclément has observed that the anæsthesia produced by the mixture of cocaine and antipyrine persists for several days.

THE NATURE AND TREATMENT OF STAMMERING.

Emil Behnke (*Jour. Laryngology and Rhinology*, July, 1891) has recently declared that the terms stammer and stutter should indicate the same condition, rejecting a former distinction that stammer should refer to that form of obstruction in which there is inability to pronounce vowels, and stutter to that form of impediment in which the consonants are at fault. The causes of these disturbances are attributable to the nervous centres controlling the mechanism of respiration, phonation and articulation.

Children afflicted with stammering do not, as a rule, outgow the habit; ridicule or severity will increase the difficulty.

Conditions needing surgical or medical interference, such as spinal curvature, post-nasal adenoids, decayed teeth, intestinal worms and phimosis, may prevent cure of stammering until their removal.

Cases of stammerers are divided into two classes—those in which fault lies in management of respiratory apparatus, and those in which it does not. In the former the prognosis is more hopeful. To test patient, he is placed flat on his back upon a couch, and is drilled in methodized and graduated series of sounds and inspiration, produced by diaphragm and muscles of abdominal walls, the hand of the trainer upon the epigastrium accentuating these movements.

If, after such practice, the patient shows improvement, a favorable result may be expected from treatment. In those cases in which obstruction does not depend upon imperfect respiration, Behnke attributes much of trouble to "an involuntary exaggeration of all the stops and checks taking place in vocal apparatus from glottis to lips, and he must therefore be trained to make these closures as shortly and lightly as possible." Thus a short aspirate may be inserted after a consonant; as G-h-eorge, instead of George, or, as patient would say, G-g-g-eorge; and p-h-a, instead of pa.

Stammerers sing and whisper without difficulty, because in singing there is almost continued tone, and in whispering there is absence of tone. It is advised to dwell on vowels at expense of consonants—and if vowel difficult to sound, it should be preceded by a short inspiration. Another beneficial exercise is to speak slowly, with teeth overlapping and pressed tightly together.

Result of treatment influenced by severity of case, intelligence of patient, also existing morbid conditions, especially those due to chorea or other nervous disturbances.

SOME OBSERVATIONS ON THE USE OF PIPERAZINE.

Dr. Heubach, assistant in the Clinic of Prof. Zuelzer, in the Johanneum, Berlin, says, (*Internat. Centralblatt für die Physiologie u. Pathologie der Harn. u. Sexualorgane*) for several months back have been making trials with piperazine in their clinic and polyclinic. This base, which is readily soluble in water and strongly alkaline in solution, has the chemical formula $C_4H_{10}N_2$, and in constitution is a piperidin in which the CH_2 group has been replaced by the NH. It is now manufactured on a large scale (by the Chemische Fabrika. A., vorm. Shering, of Berlin) and has been therapeutically employed in various quarters, notably by Ebstein and Sprague, Vogt, Bardet and others.

By these observers the remedy was preferably tried in cases of gout, and also on patients in whom it was necessary to dissolve uric acid concretions in the kidneys (gravel and urinary calculus). The application was suggested by the fact that piperazine experimentally dissolved large quantities of uric acid in test tubes at 20° C. (68° F.); that the urate combination of piperazine, furthermore, was at least seven times more readily soluble than the hitherto therapeutically preëminent car-

bonate of lithium, and finally that the base, even in the presence of excess of uric acid, produced no acid but an easily soluble neutral salt.

Ebstein and Sprague furnish a table of results, produced on a patient with uric acid diathesis by seven days treatment, with increasing dosage of 1 to 3 gm. piperazine. This table gives the impression that the volume of urine was increased thereby; in one case the exhibition of 2 gm. of piperazine increased the volume from 1250 to 2160, and in another instance even to 2270 ccm. in 24 hours, while the sp. gr. was similarly reduced. In addition the acid reaction of the urine was considerably reduced, and in one case became alkaline. The uric acid, which, according to Vogt, is reduced in proportion with urea, does not show this action.

In collaboration with Dr. Kuh, he undertook a series of experiments, both of them taking at the same time, without change of regular diet, 2.5 gm. piperazine one day, 1 gm. the second, and 2 gm. the third day, dissolved in a glass of seltzer-water. Within two hours after taking the piperazine it could be found in the urine.

The urine was tested in separate portions, three taken during the day and during the night.

After administration of the largest dose, 2.5 gm., an inconsiderable increase of urine volume was noted in both persons —in one to 2260, and the other 1970, ccm. in 24 hours. The reaction always remained acid, and the specific gravity was not heightened. One gramme doses lowered the volume to a normal amount, 1630 and 1500 ccm., always acid.

The quantity of urine was not increased; the sp. gr. also continued within normal limits. The reaction of the urine, estimated alkalimetrically, was always acid, and approximately amounted to the normal, 2.29 with one, and with the other 1.75 g. HCl.

To determine the effect on metabolism they selected N. (nitrogen) and P_2O_5 (phosphoric acid). The nitrogen (resp. urea) showed no increase—resp. 11 and 10.8 in 24 hours; nor did the phosphoric acid, which amounted to 2.4 and 2.3 g. Consequently the relative amount of the latter continued normal, viz., 22.4 and 21.6.

Corresponding with this showing, the use of piperazine induced no disturbance in their general condition; but it must be noted that after taking the largest dose (2.5 gm.) both persons experienced very severe headache on the following morning, and in one vomiting occurred. The smaller doses of 1 gramme were taken regularly for several days consecutively without causing any derangement.

As regards the uric acid, a very small increase (0.78 and 0.49 g. in 24 hours) was shown in all cases.

A trial was made to see if urine containing piperazine would dissolve uric acid; the result, even at high temperature and with extended action, was decidedly negative.

The therapeutic trials which they then undertook yielded distinct success in two cases of lumbago; both were treated by subcutaneous injections of a 2 per cent. solution. Patients received 0.5 gm. doses four times daily, a total of 2.0 gm. in 24 hours. Improvement in conditions was noted on the third and fifth days, and on the ninth and tenth days both patients were free from pain. The injections, they state, were in themselves quite painful, but they did not cause abscesses, nor were they followed by unpleasant after-effects. For subsequent use of the remedy they prefer to use voluminously diluted solutions.

Piperazine deserves particular attention in uric acid concretions in the kidneys. They had opportunity to study two such cases in detail, and they proved remarkable, because of the exceedingly favorable results.

These two cases, in connection with the cases reported by Bardet, speak distinctly in favor of a specific effect of piperazine, and show the advantage and desirability of further therapeutic observation in this direction.

ACTION AND USES OF FILICIC ACID.

The isolation of the active principle of male fern has acquired toxicological interest of late, on account of the occurrence of several fatal cases of poisoning attending the therapeutic employment of the extract. The toxic properties of filicic acid are still disputed. It is uncertain whether filicic acid possesses toxic properties. Much, however, depends upon whether we employ the pure crystalline product or the crude precipitated acid. Herr Poulsson shows that these two modifications differ in their physiological and chemical relations; that there is but little doubt that the inactive crystalline body is an anhydride or lac-

tone of the amorphous filicic acid, and is better termed filicin. Filicic acid is well adapted for therapeutic purposes, as it is easily dissolved, held in solution in the intestines, and is only very slowly absorbed; thereby explaining how it effects the expulsion of parasites. These results explain why a freshly-made extract of male fern is more active than in older preparations.—*The Pharm. Journ. and Trans.*, p. 85, August 1, 1891.

HYPNOTISM.

In a paper read before the Colorado State Medical Society, Eskridge (*New York Medical Journal*, August 1, 1891) stated that hypnotism is real and subjective and not dependent upon any mysterious influence of the hypnotist over the subject. The therapeutic value of hypnotism is governed by the mental impressions made during hypnosis, a state of increased impressionability. Much that is accomplished by hypnotism may be accomplished by repeated impressions without hypnosis. Hypnotism carries with it certain dangers to the hypnotist, to the subject and to the community, to be obviated by proper precautions. It remains to be determined whether or not the therapeutic value of hypnotism is greater than the unavoidable dangers of its application. The practice of hypnotism should be under state control and restricted to physicians and other scientific investigators.

MEDICINE.

ACTION OF UREA ON THE VASCULAR WALLS.

Dr. Munk, several years ago, on perfusing blood to which urea was added through a surviving kidney, found that the addition of urea accelerated the blood stream, and increased the secretion from the kidneys. This result was also produced by sodic chloride, the sulphates and phosphates of the alkalies, creatin, sugar, creatinin and other substances. The vaso-dilator action of the urea on the kidneys was not due to the action of the urea on the central nervous system, for it occurred in the excised and still living kidney. Cavazzani and Rebustello have made somewhat similar experiments by perfusing blood mixed with urea through several organs, but in all cases the organs or parts were left *in situ*. The fluid perfused was 1 part of bullock's blood mixed with 2 parts of normal saline solution (0.75 per cent. common salt). The animals employed were dogs, cats and rabbits. The quantity of urea added to the blood varied from 0.5 per cent. to eight per cent. as a maximum. Urea possesses a marked vaso-dilator action not only on the blood vessels of the kidney, bnt also on the vessels of the brain, liver and musculo-cutaneous vessels in the last case, as shown by its action on the blood vessels of the hind limbs. Speaking generally, the vaso-dilator action of urea is directly proportional to the quantity per cent. of urea present in the blood. The minimum percentage of urea required to cause vaso-dilatation is for the kidneys 0.5 per cent. and for the other organs mentioned one per cent. In opposition to Munk, the authors have never observed a secretion of true urine during their experiments.—*British Medical Journal.*

DISORDERS CAUSED BY TRICOCEPHALUS DISPAR.

Dr. Moosbrugger (*Jahr. f. Kindhlkde*, xxxiii, p. 137, from *Würtemberg med. Correspondzbl.*) questions the usually accepted statement that tricocephalus dispar does not cause symptoms. He has found four recorded cases in which serious nervous symptoms were attributed to it, and adds a fifth case, a boy, aged 1½ years, who for six months had had diarrhœa of gelatinous slimy stools (sometimes blood-stained), had suffered from spasmodic cramps of the arms and legs, and had deteriorated very much in general health. The presence of progressive anæmia suggested the possibility that the child might be the host of anchylostoma duodenale; an examination of the fæces, however, showed the presence of the eggs of tricocephalus dispar in such enormous numbers that Professor Leichtenstern calculated that the child was passing about 3,000,000 eggs with its stools every twenty-four hours; he further calculated that to yield this number of eggs there must have been from 1,000 to 2,000 female worms in the child's intestines. Treatment by santonin, calomel, male fern, dry clysters of garlic, tobacco, yellow iodide of mercury, and decoction of pomegranate, met with little success, only two worms (one male and one female) being expelled. However, during a severe attack of feverish bron-

chitis they were passed spontaneously in large numbers. Their injurious effect on the host is to be attributed in part to abstraction of blood and serum, and partly to reflex irritation. Infection is believed to take place usually by the ingestion of imperfectly cleansed vegetables, but in this case the child was in the habit of sucking and swallowing garden soil.—*Brit. Med. Jour.*

KERAUNO-NEUROSES.

Frankl-Hochwart (*Zeitschr. f. klin. Medicin*, Bd. xix, H. 5 u. 6, 1891) describes as kerauno-neurosis a condition that develops in persons who have been struck by lightning. The symptoms are those characteristic of the traumatic neuroses, and include palsies, tremor, derangement of common and of special sensation, limitation of the visual fields, ataxia and exaggerated reflexes.

SPASTIC INFANTILE SPINAL PARALYSIS.

Dr. Pierre Marie (*Gazzetta dégli Ospitali*, No. 57, 1891) thinks the prognosis not absolutely unfavorable; an amelioration may take place in three to ten years. A certain degree of rigidity will always persist. Regular and non-violent massage, using large, passive movements, warm baths and galvanizations of the medulla, are the most efficacious means known.

THE SPECIFIC GRAVITY OF THE BLOOD IN HEALTH AND IN DISEASE.

As a result of a series of fifty-four observations in conditions of great diversity, Siegl (*Wiener klin. Wochenschr.*, iv, 33, 1891) has arrived at the following conclusions:

1. The specific gravity of the blood is dependent upon the proportion of hæmoglobin and is independent of the number of blood-cells.

2. Diseases, acute as well as chronic, only affect the specific gravity of the blood when they have led to gradual prostration. Rapid loss of strength, on the contrary, appears to exert but little influence. In the course of diseases in which the blood is contaminated by the products of pathological tissue metamorphosis, or in which the blood is deficient in its normal chemical constituents, there is, in addition to an absolute change in the specific gravity, a disproportion between the specific gravity and the percentage of hæmoglobin. In hepatogenous jaundice, in diseases of the lungs or of the heart attended with cyanosis, in diseases attended with loss of bodily fluids, the specific gravity is (relatively to the percentage of hæmoglobin) raised. When the blood is deprived of albumen as a result of albuminuria, and probably of long-continued suppurative processes, the specific gravity is lowered. In renal disease the quantity of urine and the degree of albuminuria will in each case indicate how far hydræmia or hypalbuminosis is responsible for the abnormal specific gravity.

3. In cases of anæmia, in which there is no organic disease that exerts an influence upon the specific gravity of the blood, this constitutes an index of improvement or of progression as regards the anæmia.

THE INFLUENCE OF DISEASES UPON THE RESPIRATORY INTERCHANGE OF GASES.

To determine if disturbances involving the exchange of gases between the air and the blood, and if anomalies of tissue metamorphosis in conjunction with which the need of oxygen or the capability of the tissues to unite with oxygen may be altered, do in reality materially influence the respiratory interchange of gases, Kraus and Chvostek (*Wiener klin. Wochenschr.*, Bd. iv, 1891, p. 33) made forty observations in twelve persons with various forms of anæmia (pernicious and secondary anæmia and chlorosis), leukæmia, and the carcinomatous cachexia. Under ordinary conditions no aberration from the normal was observed in the gaseous interchange. The taking of nourishment invariably augmented the interchange, as happens also in healthy persons during digestion. In a small number of cases muscular activity increased the combustion of oxygen and the production of carbonic acid, but not in the same degree as in health; in the anæmic patients, the respiratory coefficient (which normally arises) was lowered.

To determine the activity of the bodily oxidation, benzole was administered to six patients with diabetes, anæmia, carcinoma of the stomach, and leukæmia, and the quantity of phenol excreted was measured. The proportion of phenol was found small in conditions of impaired

nutrition, but no special change was observed for any single affection.

In investigating the influence exerted upon the respiratory process by an increased volume of oxygen in the inspired air, an admixture of ten volumes of nitrogen and ninety volumes of oxygen was used. The subjective condition of healthy and ill persons was not materially influenced by the continuous breathing of such a mixture; nor did objective manifestations appear. During the first ten minutes of easy breathing a considerable increase in the comparative quantity of oxygen absorbed was noted; subsequently the absorption of oxygen fell to the normal or lower. That this primary increase took place in anæmic patients with a decided deficiency of hæmoglobin makes it evident that the excess of oxygen taken up combines with the tissues. For a short time at the beginning of the experiment the exhalation of carbonic acid was increased, though not in the same degree as the absorption of oxygen. These observations indicate that there is no more substantial basis for the employment of oxygen in disease than has hitherto existed. Clinically, inhalations of oxygen were inefficacious. The most important indication for such a measure would be the sudden occurrence of respiratory insufficiency.—*Amer. Jour. Med. Sci.*

EPILEPTIC AUTOMATISM.

In a recent number of the *Revue Médicale de la Suisse Romande*, Dr. Grandjean has related a case of very great interest. It is that of a man of thirty-four, who, with the exception of an attack of somnambulism at the age of eight—an attack in which he had walked into his father's bedroom and congratulated him on being elected king of Italy—had been previously healthy. Towards the end of January, 1890, he began to suffer from nightmare and depression, without apparent cause, but he had no headache or vomiting. This condition persisted for two weeks. Then, on Feb. 9th, after going to his office and working as usual, at nine o'clock in the morning he took his hat, set out on foot, and arrived at Payerne, a village fifty kilometres distant. He had no recollection of anything that happened from the time he left his office until he awoke, in the middle of the night, in an inn at Payerne. His boots, he found, were much worn, but his clothes were in good order. He presented none of the usual effects of having passed through an epileptic paroxysm, except that he had a violent headache. After this he remained as usual for seven months, except that he had occasional "absences." Thus, on one occasion, while writing, he was surprised to find that he had continued at his work for an hour without any recollection of having done so. The work was done perfectly, without a single mistake. At the end of the seven months he had another attack similar to the first, but lasting for two days, during which he had gone about to different places acting in a manner which did not strike any observer as strange or peculiar, but being all the time unconscious. Five months later he had a similar, even more elaborate, attack, which also lasted for two days, and was followed by headache more violent than usual. Dr. Grandjean comes to the conclusion that this is undoubtedly a case of epileptic automatism. He does so from the nature of the attacks, from the fact that the man also suffered from "absences" of longer or shorter duration, really attacks of *petit mal*, and because the latter became almost totally suppressed under treatment by the bromides. The case is an important one, and it should serve to impress the fact once more that some criminals who profess complete unconsciousness of the act or acts with which they are charged may really be the subjects of epileptic automatism. If this patient had committed some crime during one of those periods of unconsciousness, a defence to the effect that he was the subject of epilepsy would have been received with considerable doubt, especially as there was nothing in the nature of a severe fit to point to in the former history, but only those temporary "absences" without any obvious convulsion —*Lancet.*

STERILIZATION OF BRUSHES.

These are boiled for five minutes in the soda solution and kept ready for use, floating in sublimate solution, 1 to 2,000 (sublimate and acetic acid equal parts), with the bristles down in a small, enamelled, water-tight box, devised by Von Bergmann. In the operating-room the solution is changed two or three times daily.—*Uni. Med. Mag.*

A CONTRIBUTION TO THE PATHOLOGICAL ANATOMY OF THE RETINA AND OPTIC NERVE IN DISEASES OF THE BRAIN AND ITS MEMBRANES.

In the laboratory of Prof. Iwanski, the author has examined the retina and optic nerve in purulent basilar meningitis, 7 cases; tuberculous meningitis, 4 cases; chronic meningitis, 12 cases; hæmorrhage of the brain, 7 cases; and arterio-sclerosis of the brain, 9 cases, and has determined the following facts, viz.:

1. All diseases of the brain and of its membranes in consequence of injuries inflicted upon them, induce pathological changes in the retina and optic nerve.

2. Acute inflammation of the meninges occasions œdema of the papilla and disturbances which are intimately associated with the chief causes of this latter and the retina. (Neuro-retinitis œdematosa.)

3. Chronic inflammations of the meninges produce the same condition in the retina.

4. Arterio-sclerosis of the cerebral vessels extends also to the papilla and the retina, and always induces peripheral œdema in the latter. The œdema is the result of chronic venous hyperæmia, which is occasioned by disturbances in the circulation of the blood.

5. When extravasation follows arterio-sclerosis, this phenomenon can usually be observed also in the vessels of the retina.

6. In consequence of the pressure, which the accumulated mass of exudation exerts upon the optic nerve entrance, choked disc (staungspapilla) very frequently results.—Falser, *Deutsch. Med. Zeit.*

SURGERY.

REMOVAL OF SARCOMA OF THE MESENTERY.

A case has been lately recorded by Professor Llobet, of Buenos Ayres (*Revue de Chirurgie*, August, 1891), in which he removed with complete success a sarcomatous tumor of the mesentery, and at the same time resected a portion of the small intestine almost 5 feet in length. The patient, a man aged 23, whilst under treatment for urethral stricture, was found, quite by accident, to be affected with a very movable hard tumor of about the size of the kidney, which was situated within the abdominal cavity in the middle line, and about two inches below the umbilicus. The existence of this growth had not been previously suspected by the patient, who asserted that he had not at any time suffered from symptoms of disturbed digestion, or from pain in the abdomen. The growth was free from tenderness, save on forcible compression. In his endeavor to diagnose the nature of this morbid condition, the author was lead to reject the idea of a floating kidney by reason of the absence of urinary troubles, and of the free lateral mobility of the growth, and, guided by the facts of the situation of the swelling in the middle line, and of the absence of pain and of both general and local disturbance, he was disposed to regard it as a tumor of the mesentery. At the end of 1890 laparotomy was performed for the removal of the growth. A globular tumor was exposed involving both layers of the mesentery, and covered in front by a long loop of small intestine. The portion of mesentery between the tumor and the intestine was traversed by numerous large blood vessels. It was thought to be necessary to remove with the tumor the portion of small intestine adhering to its anterior surface. Its retention in the abdominal cavity after dissection from the tumor would, it is held, have exposed the patient to the almost certain danger of relapse and of wide and general diffusion of the disease, and, moreover, the retained portion of intestine would very probably have become gangrenous as a result of removal of the corresponding portion of mesentery, and of arrest of the vascular supply. After a thick ligature of catgut had been applied to the portion of mesentery attached to the tumor, the fixed portion of intestine, the length of which measured one metre and a half, was resected, and the two open ends of the divided intestine were brought together by sutures arranged in two layers, one set being carried through the mucous coat, and the other set through the muscular and serous coats. The tumor was then excised by means of curved scissors, the bleeding being arrested by the application of the thermocautery. The operation, which was performed with strict attention to all antiseptic precautions, lasted two hours and a half. The patient, who was able to get up and sit in a chair on the fifteenth day from the date of the operation, made a good recovery. The resected

portion of intestine which had been taken from the distal part of the ileum contained a round worm. No description is given in this paper of the minute structure of the growth. Professor Llobet draws from the facts of the case the following conclusions: (1) Whenever a diagnosis has been made of sarcoma or fibro-sarcoma of the mesentery, the surgeon, unless the growth has attained very great dimensions, should resort to extirpation; (2) the operation should be performed as soon as possible, and before the tumor has become very large; it is then less serious, and there is less probability of subsequent generalization of the disease and of its local recurrence; (3) in cases in which the diagnosis is doubtful, the surgeon should perform an exploratory laparotomy; (4) if the intestine be found adherent, even over a considerable extent, there should be no hesitation in performing enterectomy; (5) resection of a considerable length of small intestine is attended with the less risk the further the resected portion of intestine is away from the stomach.—*Brit. Med. Jour.*

RADICAL CURE FOR OZÆNA.

Dr. Michel Christovitch, of Salonique, says that ozæna is considered as an incurable disease, simply because its treatment was exclusively symptomatic, struggling against the stagnation and fetidness of matters by means of irrigations, of antiseptic pulverizations, etc., . . . the disease being considered as originating from a strumous or specific constitutional general state.

It was only three years ago that the French Society of Laryngology, in Paris, discussed at length the nature of ozæna, and came to the conclusion that it is merely local and of a microbian origin.

Hajet has found, in the secretions of ozæna, a coccus very similiar to the capsulated coccus of Friedlander. That bacillus decomposes organic matters; then fatty acids are developed, producing the fetidness characteristic of ozæna. The microbe resides in the glands of the nasal mucous membrane, which are media propitious for the culture of that microorganism.

Ozæna, therefore, may be cured when the glands of the nasal mucous membrane disappear, either by the effects of the disease itself, or through an operation.

Ozæna is only the characteristic symptom of the disease called chronic atrophic rhinitis.

That atrophic rhinitis will develop better with a person of a weak or strumous constitution, but well constituted individuals are not exempt.

Basing myself on the anatomo-pathological lesions, I find that the most rational treatment is by destroying the focuses of microbes—that is, the degenerated mucous glands—and, according to the more or less advanced state of the affection the surgical treatment shall be more or less energetic. At the start of the affection we should limit ourselves to the cauterization of the deep and superior parts of the nostrils with the galvano-cautery, and repeat it according to circumstances. When the lesions of the atrophic rhinitis are already advanced, it is absolutely necessary to practice the real operation in destroying, by removal, all the degenerated mucous glands covering the *nares internæ* up to the naso-pharyngeal region. Then, in order to complete the operation, we cauterize with the galvano-cautery.

Process of Operating.—On the day preceding the operation we make abundant alkaline and antiseptic irrigations of the nostrils, which means are insufficient for a complete antisepsy and for removing the concrete matters, which are very adhesive, especially toward the superior anfractuosities. We render the field of operation less sensitive, by means of pads of hydrophile cotton dipped in a concentrated solution of cocaine, which are introduded high enough and deeply.

After ten minutes, we withdraw the pads, and we proceed with the operation. With a scraper elongated and of small dimension, so that it may be easily introduced, even into the small anfractuosities, we scrape and empty effectually and rapidly all the degenerated nasal mucous membrane covered with concrete masses, even to the naso-pharyngeal region, and we continue scraping in this way until the fetidness has completely disappeared. After the scraping we immediately make the cauterization of the profound parts that have escaped scraping. The hæmorrhage, that is considerable, stops rapidly by the introduction, into the nostrils, of the pads of hydrophile cotton in a large quantity.

One single operation well made suffices, in most cases, for the complete cure.

That operation presents no inconvenience, except some pains in the ears.

In one case, the consecutive treatment consisted simply in snuffing powder of iodoform mingled with powder of boric acid.

In conclusion, the efficacious treatment should be local and, in the second place, general. Ozæna should be treated early, not only in order to stop the progress of the affection, but also in order to prevent the very grievous consequences resulting from the continual inspiration of the nasal putrid matters.

THE SEAT OF PUNCTURE IN PARACENTESIS ABDOMINIS.

Trzebicky (*Archiv. für klin. Chir.*, xli., 4), in performing paracentesis abdominis at the point of election—that is, midway between the umbilicus and the anterior superior spine of the ilium—wounded a large blood-vessel which gave such troublesome bleeding that the life of the patient was threatened. The hæmorrhage was arrested by compression of the common iliac artery. Incited by this experience, and by several reports of fatal bleeding following puncture at this point, Trzebicky conducted an experimental research upon a large number of cadavers. As a result of this he announces the following conclusions:

In the majority of cases paracentesis performed at a point midway between the umbilicus and the anterior superior spinous process of the ilium is perfectly safe, since neither the epigastric artery nor any large branch of this vessel is liable to be wounded. The artery commonly crosses this line at the junction of the inner with the middle third.

In a certain proportion of cases, however, the epigastric artery or one of its branches lies directly beneath the point of election.

The course of the epigastric artery is seldom exactly similar in the two sides of the body.

Since the artery runs within the sheath of the rectus muscle, its course depends mainly upon the position of this muscle. In case the two recti are separated by abdominal distention, the artery is displaced, so that it lies very near the point of election for puncture. The rectus muscle does not, however, bear a constant relation to the artery. At times, even though the muscle is displaced to the side, the artery lies near the middle line.

Variations in the origin of the epigastric artery seem to have no influence on the course of the former vessel.

The artery is usually accompanied by a single vein.

Paracentesis abdominis should be performed either in the linea alba or in the outer half of the line joining the umbilicus and anterior superior iliac spine. In case the linea alba is selected, it is not important to keep strictly in the middle line, since there is an arterial branch which may be wounded if the trocar is entered, even slightly, to one side.—*Am. Jour. of the Medical Science.*

OBSTETRICS.

THE TREATMENT OF ALBUMINURIA AND NEPHRITIS IN PREGNANCY.

Mijulieff (*Geneesk. Cour.*, 1891, No. 18) has derived the following indications for treatment from three cases of nephritis in pregnancy in which the fœtus perished in the uterus: when a woman previously healthy shows symptoms of nephritis during the first months of pregnancy, abortion should be induced; in the second half of pregnancy, it is rarely necessary to interrupt pregnancy, except for urgent symptoms. In chronic nephritis during pregnancy, labor should be induced in the interest of mother and child as soon as viability is possible.

OPIUM ENEMATA IN THREATENED ABORTION.

In the *Gazeta Lakarsks*, No. 33, 1891, p. 657, Mr. Feliks Arnstein, of Kutno, Russian Poland, maintains that in case of threatened abortion the practitioner is justified in accelerating and terminating the process only when the interruption of gestation is induced by death of the fœtus. "In all these cases" he says, "be the uterine pains of short or long standing, weak or strong; be flooding absent or present, scanty or profuse; be the cervix softened or not, and the os closed or widely gaping—in all alike treatment must consist in adopting all possible measures for retaining the ovum in the womb and arresting its threatened expulsion therefrom." As far as the writer's personal experience goes, the best way to accomplish this is the persevering administration of opium *per rectum*. As much as 15 drops of simple tincture of opium, *Ph. Ross.* (containing 1 in 10 of the drug) with 2 tablespoonfuls of lukewarm water should be injected into

the bowel every hour, the patient lying quietly in bed and taking occasionally some acid drink. Leaving out of consideration cases in which complete detachment of the ovum has already taken place, the treatment is said to be followed by the best possible results: "the uterine pains steadily and fairly quickly become less intense and less frequent, and ultimately cease altogether; hemorrhage becomes less and disappears; in some (occasionally twenty) hours the os is found to have contracted and the ovum to have receded." The author relates a case in which a fairly advanced abortion was controlled by the injection of 45 drops of the opium tincture. In some cases, however, the total quantity required for the purpose may amount to 80 or over 100 drops. Pregnant women are thought to tolerate opium much better than other persons, the toxic effects being usually limited to a heavy feeling about the head, and drowsiness, which disappear in a day or so.—*British Med. Journal.*

OBSTETRICAL PARALYSES IN THE NEWBORN.

Dr. Danchez (*Annales de Gynéc. et d'Obstét.*, October, 1891) concludes a series of observations upon injuries to the child during labor, and their more or less permanent effects. A number of instructive cases have beed collected and published in abstract in Dr. Danchez's memoir. In several, pressure on Erb's point (where the fifth or sixth cervical nerves emerge) caused more or less paralysis of the deltoid, brachialis anticus, biceps, and supinator longus. This pressure is made by the obstetrician's fingers during version, and traction on the shoulders during extraction in breech cases, and in normal presentations where the second stage is lingering. Sometimes the serratus magnus is paralysed. The forceps may do as much harm as the fingers. A bad case of dislocation of the shoulders and paralysis, under Dr. Monnier's care, is published for the first time by Dr. Danchez. A country midwife undertook a breech case. In order to hasten delivery she dragged the child's body forcibly by the feet. The arms were thus pulled over the head. Next day it was noticed that the child's arms were abducted and rotated inwards. When the child was seen four years later by Dr. Monnier the arms remained in that position. When it was eleven days old a physician at Quimperlé diagnosed dislocation of both shoulders, but did not, apparently, attempt to reduce them. Electricity was tried for six months by another practitioner. When examined by Dr. Monnier the dislocations were evident. All the muscles of the shoulder were atrophied; the teres minor and infraspinatus formed a firm cord. The child could hardly use his hands. He was a male in good general health. Sensibility was intact all over the damaged upper extremities. Dr. Danchez distinguished two classes of congenital obstetrical paralyses. The first class includes the so-called spontaneous paralyses, when the lesion is entirely due to the natural or abnormal mechanism of labor, and not to the obstetrician or his instruments. The head or one of the limbs is pressed against the surrounding parts to the damage of certain nerves. The second variety bears the term "traumatic paralysis," where during traction, version, or the use of the forceps, some damage is done to a nerve or to a plexus of nerves. Over and above these two classes Dr. Danchez adds a third, which he terms "obstetrical pesudo-paralysis," where the paralysis is simulated by primary or secondary dislocation of one or both upper extremities, as in Dr. Monnier's case. Obstetrical paralyses are almost entirely motor. Nevertheless, two cases are recorded where sensory paralysis followed difficult version; the serratus magnus and many muscles in the arm were, in both instances, paralyzed.—*British Med. Journal.*

PILOCARPINE IN PUERPERAL ECLAMPSIA.

In the *Gazette hebdomadaire des sciences médicales* for September 12, Dr. Strisover adds to the experience of observers in this field the results of his use of pilocarpine in the treatment of eclampsia. By the subcutaneous injection of hydrochloride of pilocarpine the author has been successful in controlling the convulsions and preventing their recurrence in ten cases. The treating successively of such a number of cases without one death has led the author to the conclusion that pilocarpine is an antagonist to the eclamptic process; that feebleness of the pulse is not a contra-indication to the repeated injection of the drug, so long

as the convulsions reappear; and, finally, that the condition of the pupils is to be relied upon as an index to the further accession of the convulsions or to immunity by the physiological action of the drug.

GYNÆCOLOGY.

HYDATIDS IN THE PELVIS SIMULATING OVARIAN TUMOR.

Dr. Olenin (*Nouvelles Arch. d'Obstét. et de Gynéc.*, Supplement, September, 1891, p. 426) read before a Russian Medical Society a remarkable case of erroneous diagnosis. A multipara, aged 43, had a swelling with pain in the hypogastrium for two years. Abdominal section was performed and no ovarian tumor could be found, but innumerable hydatid cysts were disseminated in the usual manner over the omentum, and also in the substance of the liver. The largest of all the hydatids, a cyst as big as a child's head, was situated in the pelvis. The patient died of peritonitis on the day after operation.—*Brit. Med. Jour.*

THE DIAGNOSIS OF CHANCRES OF THE CERVIX.

According to Rasumow (*Moskau*, 1890) in the primary affection of the cervix appears in two varieties—as erosive and ulcerative, and deep chancres having sharply defined borders. The author claims that the diagnosis of primary syphilitic affection of the portio vaginalis is not as difficult as is claimed by most gynæcologists. It is made evident by the presence of indolent, hard, and immovable glands in the inguinal region. Soft ulcers of the cervix may often be overlooked, being painless and manifesting no symptoms. Rarely an inguinal bubo develops in connection with a soft chancre of the portio vaginalis.

DANGER OF CAUTERIZATION OF THE CERVIX AND UTERUS.

Dr. R. Pichevin (*Nouv. Arch. d'Obstét. et de Gynéc.*, February to August, 1891) has published a valuable series of cases, collected from numerous sources, which show the danger of lavish and careless use of caustics—a danger common to all the resources of "minor gynæcology" when employed in an unintelligent manner. Dr. Pichevin refers chiefly to mineral caustics, such as chloride of zinc in sticks, *pâte de Canquoin*, and nitrate of silver. The latter is by no means harmless. Dr. Walton describes three cases where complete atresia of the cervix with amenorrhœa followed the application of sticks of nitrate of silver to the interior of the uterus. Forcible dilatation of the cervix was found necessary. In other cases disease of the appendages followed frequent cauterization. — *Brit. Med. Jour.*

TOTAL EXTIRPATION OF THE UTERUS.

Kattenbach has totally removed the uterus 57 times—53 times for carcinoma, twice for sarcoma, twice for prolapsus. He finds that total extirpation is always indicated when the *technique* of the operation can be easily executed. He even hopes to attain a complete cure. Theoretically, partial extirpation may be excellent and sufficient, but practically, it is very rarely indicated. For example, he partially removed the uterus of a woman seven months pregnant, upon the anterior lip of which he found a carcinomatous growth as large as a walnut. He removed it by a triangular incision, and the pregnancy continued its normal course. Generally speaking, he is of the opinion that whenever it is necessary to extend the operation beyond the vaginal insertion entire removal of the organ is to be preferred, as there is much greater danger of relapse in cases of partial resection. Of the 57 cases of total extirpation only 2 died. One of these deaths was caused by uræmia from ligature of the left ureter, and also, perhaps, by an injury to the bladder. One of the dangers of the operation is the possible wounding of the ureters or the bladder. In two cases he was afterwards obliged to perform colpocleisis, on account of vesico-vaginal fistula. Three of the women in question were over 60 years of age, and grave pulmonary affections afterwards supervened; but they had previously suffered from bronchitis, emphysema and cardiac weakness. He attaches great importance to the suture of the peritoneum and to means of disinfection, and prefers solutions of boric and salicylic acid. As to the danger of relapse, a year had passed away without the reappearance of the disease, in 25 of the cases of carcinoma, and a still longer period in 7 others. All the patients recovered

promptly after the operation. In case of relapse, subsequent treatment is by the use of Paquelin's cautery and chloride of zinc. He never had abundant hæmorrhage. One patient was cured of a carcinomatous fistula of the bladder by the operation. As a whole the results of his work encourage total extirpation of the uterus, especially when it can be performed at a favorable moment.—*Journal de Médecine de Paris*, Sept. 20, 1891.

LAPAROTOMY IN PERITONITIS.

Dr. Krecke, of Munich, has collected from various sources the results of laparotomy in diffuse purulent peritonitis, and points out that the operation has been the means of saving many lives; for, although the statistics of peritonitis treated medically show a mortality considerably below that given by laparotomy, it is clear, as he says, that a large majority of the successful cases in the first category are such as would never be submitted to surgical treatment, many of them being referable to inflammatory lesions of the female pelvic organs, and not of an infective kind. Surgical intervention is, on the other hand, called for in case of general infective peritonitis, such as arises from perforation or in the puerperal period, or from extension of suppuration from other parts. Dr. Krecke points out the difficulties of securing effective drainage, and is averse to irrigation, owing to the possibility of its disseminating septic material to parts of the membrane not previously infected, or of exciting hemorrhage. He prefers rather a simple incision, drainage, and the use of iodoform gauze. Peritonitis is fatal from septicæmia, due to the absorption of poison from the cavity; but it is remarkable how tolerant the membrane may be of such virus. If the limit of this tolerance could be gauged, some guidance might be obtained as to the appropriateness of surgical interference in any case. But the fact is that there are various degrees and forms of acute peritonitis, some being fatal from sceptic absorption within a few hours of the onset, before even any noticeable change takes place in the membrane itself. Early operation is then called for, and consideration must also be had to the source of the inflammation. Dr. Krecke's statistics are interesting and instructive. He has collected 119 cases of laparotomy in general peritonitis, the origin of which was determined in all but 18, of which 9 were successfully treated by laparotomy and 9 died. The majority of the remaining 101 cases belonged to the category of perforation peritonitis. Of these, 36 were cases of general peritonitis following perforation of the vermiform appendix; 12 were cases of typhoid perforation (a condition which at first sight it might seem hopeless to deal with), and these yielded 5 successes; 12 were due to perforation from gangrene and other causes implicating the bowels —of the gangrenous not one recovered, and of the 8 others only 3 were cured by the operation. No case of perforating ulcer of the stomach has yet been saved by laparotomy—a result precisely the same as that yielded by medical treatment. Of traumatic cases, 3 of punctured wounds and 1 of gunshot were recovered; but of contusions, only 3 out of 8 cases recovered from laparotomy. The measure, however, saved 5 out of 13 cases of puerperal peritonitis. Lastly, a group of cases of peritonitis from various other causes gave 3 deaths and 6 recoveries. The total result is 119 cases of general peritonitis treated by laparotomy, 51 recoveries, and 68 deaths—statistics which are certainly encouraging.—*Lancet.*

HYGIENE.

SOME COMMON ERRORS IN THE FEEDING OF YOUNG CHILDREN.

In a recent lecture reported in the *Practitioner* for July, Dr. Cheadle draws attention to certain points in the feeding of infants in regard to which faulty and injurious practices prevail. One of the most frequent sources of disaster is the sudden weaning with the use of fresh cows' milk and water. The massive curds formed from cows' milk are frequently beyond the feeble digestive powers of the infant. Dilution will partially remedy the matter, but cannot, as a rule, be carried to a sufficient extent without unduly increasing the bulk of the food. The clots, by decomposing, cause colic, vomiting and diarrhœa. Boiled milk not only is to a certain degree sterilized, but clots less firmly than raw milk. Children should be weaned on boiled milk and barley water. In the case of very young or delicate children, however, the milk should always be peptonized at first, a proper degree of dilution being observed at the same time.

There is danger here of another grave error—the prolonged use of artificially-digested foods. While these preparations do excellent service in the case of children just weaned or with small digestive power, they are not proper for continued use. The power of digesting casein becomes gradually less, nutrition is impaired, and the child tends to become flabby, anæmic and soft in bone. Still another error consists in the furnishing of an insufficient gross amount of nutritive material. A child may be unable to digest a mixture of milk unless highly diluted, but the capacity of the stomach being limited, it may be impossible for it to take a sufficient quantity of such a mixture to supply the material required for growth and nutrition. The difficulty may be overcome by the addition of cream or some good preparation of meat juice, the quantity of milk being increased as the digestive power develops. Food deficient in fat, as well as that deficient in protein, is certain to cause trouble. Fat especially is of great importance in the food of young children. Those deprived of these two elements are often large and fat, but flabby, anæmic and rachitic; yet most of the artificial foods upon which children are so largely fed are almost wholly lacking in fat and to a less degree in proteids. The presence of an antiscorbutic element in the food is also a matter of prime importance. Fresh milk contains the element in sufficient quantity, but all farinaceous foods, and all the dry artificial foods, are decidedly deficient in this regard. They require the addition of some fresh element to supply the antiscorbutic quality.—*N. Y. Med. Jour.*

VEGETABLE BUTTER.

F. Jean states that an alimentary fat has been manufactured at Mannheim from the oils of the kernel of the cocoanut (*Cocos nucifera*). A hectare of cocoa palms, representing 225 trees, yields yearly 800 kg. of oil. Hitherto the use of these oils has been hindered by their acrid flavor; but by treatment with alcohol and animal charcoal the rancid flavor is removed and the product is rendered white. This is the only fat which is analagous to the cow's butter, as it contains the same proportion of soluble fats. It has the advantage of containing no pathogenic germs.

HOW TO JUDGE THE QUALITY OF CONDENSED MILK.

The general appearance when poured from a spoon should be glossy; the more glossy the better. It should be ropy or stringy like very heavy syrup.

The color should be that of cream, but the color varies according to the season of the year in which the milk is condensed, the same as milk not condensed varies in color. Milk is more yellow in summer, when cows are on pasture, than in winter, when they are fed on dry hay.

Thickness varies with age. Thickening by age is natural to condensed milk; rapid thickening only proves that the milk is preserved in the best manner, and that it retains in the highest degree the characteristics of milk in its natural state. Condensed milk which does not thicken by age, or which thickens very slowly, is milk abused in the process of condensing. Consumers make a great mistake in supposing that the thinnest condensed milk is the best. The thinnest condensed milk contains the most water, and, of course, less of milk solids or nutritives. The thickest condensed milk, if in sound condition, is the most valuable. There is a degree of thickness, however, that is inconvenient. If condensed milk is so thick that it will not run out when an open can is inverted, it is troublesome to dissolve. If it is not actually hard, very little stirring in the can will render it sufficiently liquid for convenient use.

Condensed milk, if properly done, does not destroy cream globules, but leaves the constituents of milk unaltered and natural. One method, therefore, of determining the relative quality of different samples of condensed milk is to ascertain the amount of butter that can be made from each.—*Scientific American.*

ALCOHOL AND THE NERVOUS SYSTEM.

In the inaugural dissertation of Dr. Spaink, of Baarn, of which a short abstract appears in the *Neurologisches Centralblatt*, an account is given of the results of certain experiments carried out with the view of testing the effect of alcohol on the peripheral nervous mechanism of rabbits. Clinically, it was found that the animals lost weight, became dull and weak, had tremor of tongue and shaking all over, and finally lapsed into a condition closely resembling delirium tremens. In the peripheral nerves examined there

was found to be the usual degeneration of the medullary sheath, but there was also present a curious corkscrew or even knotted appearance of the axis cylinders, which does not seem to have been previously described. The author regards the appearance as pathological, and not due to the methods of hardening or staining.—*Lancet.*

PÆDIATRICS.

NOCTURNAL ENURESIS IN MOUTH-BREATHERS.

Dr. Otto Koerner says that a very common cause of enuresis in children is the habit of mouth-breathing, and reports some cases in support of this view in the *Centralblatt für Klinische Medicin* for June 6, 1891. In every case of wetting of the bed by children, the physician, he says, ought to examine the little patient carefully to see whether there is any obstruction in the upper respiratory passages, and even if none be found the child should be observed when sleeping to see if it is not breathing through the mouth.

RAISING CHILDREN IN BRAN.

This method was proposed by M. Pue at the *Société Normande d'Hygiene Pratique.* It consists of a cradle which has the wooden bottom taken out, and is then lined with a strong cloth. In this is placed sterilized bran to nearly half a yard in depth. A hair pillow is used. The baby has only a short flannel shirt on and is naked from the navel downward. It is covered with a woolen blanket, and a wool-lined dress is kept to put it in when taken up for nursing. It has thus full liberty of movement in all its limbs, while its dejections pass at once into the pure bran, keeping the child dry and clean, even if there is diarrhœa. This method is a cheap one, the bran not costing as much as diapers.

INTUBATION IN CROUP.

Escherish (*Rev. Mens. des Mal. de l'Enf.*, April, 1891), after discussing the advantages and disadvantages of tracheotomy and intubation, and comparing the statistics of the two operations, arrives at the following conclusions:

1. Intubation cannot completely take the place of tracheotomy; in cases in which one can choose between the two, the interests of the patient will usually demand tracheotomy.

2. The value of intubation cannot be determined from statistics. Each case should be studied with reference to its own characteristics and the localization of the disease.

3. The advantages of intubation are the ease and rapidity with which it can be done, the ability to dispense with anæsthesia and skilled assistants, absence of an external wound, and short duration of treatment. The disadvantages are necrosis from compression of the laryngeal mucous membrane, frequent entrance of food into the respiratory passage, frequent and painful attacks of cough, difficult expectoration of membranes and secretions, and deficient pulmonary ventilation, as compared with tracheotomy.

4. Tracheotomy should be preferred to intubation when the diphtheritic process is rapidly extending to the bronchi or involves them from the beginning, when the patients are very young and the muscles of expiration only slightly developed, when the disease has a septic character or has followed some other debilitating disease.

5. Intubation is indicated in cases in which the process is limited to the pharynx and larynx and does not show any septic characteristics.

6. If at the end of five days it is still improper to remove a tube which has been introduced, if alimentation becomes difficult and there is a probability that the disease has extended to the bronchi, the tube should be removed and tracheotomy should be performed.

THE MORPHOLOGY OF BREAST MILK AND THE NUTRITION OF THE CHILD.

An extensive study by Ivanoff (*Thèse de Saint Petersburg*, 1890) of this subject led him to the following conclusions:

1. The cellules of colostrum are of epithelial origin.

2. The multiparæ colostrum changes to milk more rapidly than in primiparæ.

3. Puerperal diseases retard the disappearance of the colostrum corpuscles.

4. These corpuscles reappear in the milk after ten months of lactation, and when the infant is only partly fed from the breast.

5. The free hyaline corpuscles, as well as those which are enclosed in the fatty globules, form a constituent of normal milk at a certain period of secretion.

6. Good health, good nutrition, and youth in the mother, give a milk richest

in fatty globules of large size, as is also true of the cellules.

7. The last portion of milk taken at a feeding holds fewer globules, and these of smaller size than the first portions.

8. The estimation of the nutritive quality of milk should be based upon the number of fatty globules; and, secondarily, upon their size, the quantity of cellular element, and, finally, upon the quantity of granules.

9. Milk which contains a very large number of fatty globules (more than 3½ per cent.) is not well borne by very young infants.

10. Milk, the globules of which are large, is less nutritive and less well borne.

11. The maximum of daily increase of weight of the child is produced by milk which contains a mean quantity of fatty globules of medium size (27.7 grammes daily).

12. The milk which contains few fatty globules gives little increase of weight (16 grammes daily); and the same is true if the fatty globules are in too great quantity or are too large (19 grammes daily).

13. Women who are thin and young in general are the poorest nurses, often making the children dyspeptic and giving them a mean daily increase of weight of only 11.5 grammes.

14. The microscopic examination of a freshly secreted milk give a sure indication of its nutritive value.

MEDICAL CHEMISTRY.

REAGENT FOR ACETONE.

Prof. Alf. Schwicker communicates a new method of detecting acetone to the *Chemiker Zeitung* (No. 52).

He found that a mixture of acetone and aqueous ammonia dissolves powdered iodine with evolution of heat. The liquid becomes turbid, and after a time separates iodoform. At the same time there is produced an irritating odor, causing tears in the eyes, which is probably due to iodine substitution compounds of acetone. No gas is given off, and the liquid is found to contain acetic acid.

This reaction may be used to detect acetone, for even traces of the latter dissolved in water respond to it. Moreover, *alcohol* does *not* produce iodoform under the same circumstances.

The best way to execute the test is as follows:

To the solution containing or supposed to contain acetone add a few drops of strong ammonia, and then 1 or 2 drops of a decinormal iodine solution.

This will cause a blackish cloud of iodide of nitrogen, which disappears on shaking or gently warming, and soon makes place to a yellowish cloud of iodoform if the liquid was not too diluted. By adding 1 or 2 drops more of the iodine solution, the amount of iodoform may be increased. After every new addition of iodine, and disappearance of the black cloud by shaking, a few moments are allowed to elapse. On shaking, the odor of iodoform will be distinguishable in spite of the ammonia.

In the case of a very dilute solution of acetone a more dilute iodine solution must be used.

Should the black iodide of nitrogen not disappear, but remain, it may be decomposed by the cautious addition of hyposulphite of sodium.

Solutions of acetone of 1 in 5000 yield a precipitate of iodoform after a few minutes, or at least exhibit a decided odor of iodoform.

Alcohol, as already stated, does not respond to this reaction, but aldehyde does. In this case iodoform is also produced, but the acid generated as a secondary product must in this case be formic acid.

SCOPOLAMINE.

Prof. Ernst Schmidt has recently given, at a meeting of German Naturalists and Physicians, some further particulars of an alkaloid separated by him from the root of Scopola atropoides some eighteen months ago, and provisionally named, scopolamine. The hydrobromide occurs in beautiful glassy crystals, and from the results of analyses of this salt and the hydrochloride, hydriodide, sulphate, and a highly characteristic gold salt, as well as of the free base, the composition of scopolamine is represented by the formula $C_{17}H_{21}NO_4$. Scopolamine appears to contain a hydroxyl group, as it yields a monoacetyl derivative; towards nitrous acid it behaves as a tertiary base. By boiling with baryta water it is split up into atropic acid and a crystalline base, melting at 110° C., which has a composition represented by the formula $C_9H_{13}O_2$. Professor Schmidt announced that the "hyoscinum hydrobromicum" at present met with in commerce consists essentially

of scopolamine hydrobromide. Scopolamine is said to have also been obtained in small quantity from belladonna root and from stramonium seed. The mydriatic basic substance separated by the author from one sample of Duboisia myoporoides consisted essentially of scopolamine, but that obtained from a sample of the leaves from another source was essentially hyoscyamine.

CLIPPINGS AND NEWS ITEMS.

CLASS BANQUET.

The "class of '78" of Jefferson Medical College held its fourth annual banquet at the Hotel Bellevue, December 29, 1891. The invited guests were Professors Da Costa and W. H. Pancoast, the two living professors of the faculty of 1878, and Dr. T. H. Andrews, with Dr. L. Webster Fox, class president, in the chair.

Among those present were Drs. Daniel E. Hughes, A. H. Hulshizer, Dr. Frantz, J. Moore Campbell, T. E. Conard, M. John Cummings, Nevin B. Shade, Lambert Ott, Harry Braus, H. Howard Drake, J. A. Wamsley, Dr. Arney, H. Page Haugh, Fred. A. Oliver, F. H. Carrier and J. W. Sampsel.

The next banquet will be held in Philadelphia, November 10, 1892.

AMERICAN PHARMACEUTICAL ASSOCIATION.

Membership in the American Pharmaceutical Association is obtained only by election at the annual meeting. "Every pharmacist and druggist of good moral and professional standing, whether in business on his own account, retired from business, or employed by another, and those teachers of pharmacy, chemistry, and botany who may be specially interested in pharmacy and Materia Medica," are eligible for membership. For blank applications and further information address, Dr. H. M. Whelpley, 2729 Washington Avenue, St. Louis, Mo., Chairman of Committee on Membership.

DR. LUCIA REDDING THOMPSON.

Dr. Thompson, one of our recent French correspondents, has returned to this city and will open a Sanitorium.

THE SONG OF THE SADDLE-BAGS.

BY H. C. S.

Faded and rusty, mud-spattered and worn,
Rifled of contents, bottles broken and gone,
Covered with dust, I hang here and mourn
For the days of yore;
When the world bowed down to me,
As I sang this song exultingly:—
"Now and forever, the whole round world wags,
To the rhythmic song of the saddle-bags!"

In palace and cottage, at sea or ashore,
'Mid sunshine or storm, I continued to pour
Forth my treasures of healing frail man to restore
To comfort and health.
Requiring no thanks, accepting no fee,
Again and again I sang joyously:—
"Now and forever, the whole round world wags,
To the rhythmic song of the saddle-bags!"

Like Napoleon I sigh'd, "the world is small!"
I longed for new races—to conquer them all.
I laughed when 'twas whispered I might have a fall
From my high estate.
I grew pompous and proud and vain as could be,
And continued my song exultingly:—
"Now and forever, the whole round world wags,
To the rhythmic song of the saddle-bags!"

Oh, 'tis bitter, indeed, that my hopeless disgrace
Shou'd be caused by a changeable human race
In its boasted progression (for such they've the face
To proclaim it!)
Old, battered, helpless, I accept the decree,
E'en though I murmur impatiently:—
"Never again! the whole round world wags,
To a *later* song than the saddle-bags!"

There's a lesson of sorrow for you in my song;
A lesson for all who believe themselves strong.
Remember that pride and great strength belong
To youth, and like me
The subject of jeers you may live to be,
As you childishly moan in your misery—
"Never again! the whole round world wags,
To a *later* song than the saddle-bags!"

—Indiana *Med. Journal.*

MEDICAL LEGISLATION IN OHIO.

Pursuant to call issued by the Cincinnati College of Medicine and Surgery for a delegated convention of the medical colleges of the State of Ohio, which was held at Columbus, December 3d, representatives of the following faculties were present, viz.: Starling Medical College, Toledo Medical College, Pulte Medical College, Columbus Medical College, Medical Department of the National Normal University, College of Physicians and Surgeons of Columbus, Woman's Medical College of Cincinnati and the Cincinnati College of Medicine and Surgery.

On motion, Dr. Starling Loving was elected Chairman and Dr. Charles A. L. Reed, Secretary.

On motion of Dr. C. E. Walton, representatives of the Physio-Medical Society of Ohio were admitted to a vote in the convention.

Dr. Charles A. L. Reed presented the following:

Resolved, By the Medical Colleges of Ohio, in convention assembled, that the Legislature be and is hereby requested to enact a law which shall embody the following features, viz.:

1. The creation of a board or boards of medical examiners in the composition of which equitable and just representation shall be accorded to the various recognized denominations of medical practice.

2. The examination of all candidates for the practice of medicine holding diplomas hereafter issued by medical colleges which shall be deemed in good standing by the board.

3. Exemptions from examinations to extend only to those who at the time of the enactment of this law shall be recognized as legal practitioners within the meaning of existing statutes; but all legal practitioners shall be required to register.

4. A penal clause which shall secure the enforcement of the foregoing provisions.

Dr. C. E. Walton, on behalf of the Legislative Committee of Cincinnati, presented the registration law approved and promulgated by that committee.

On motion by Dr. Shockey, the resolutions presented by Dr. Reed were approved.

On motion by Dr. Kinsman, the secretary was directed to forward transcripts of these proceedings to each local medical society in Ohio, and to the medical press.

On motion by Dr. Scoville, a committee was appointed to confer with the Legislative Committee of Cincinnati for the purpose of securing such changes in the bill proposed by that committee as to make it conform to the resolutions adopted by this convention.

The chair appointed as such committee, Drs. S. S. Scoville, T. C. Hoover, G. W. Mayhew and Chas. A. L. Reed.

Adjourned.

CHARLES A. L. REED, Sec.

STARLING LOVING, Chairman.

MORBID CHANGES IN JOINTS IN SYRINGOMYELIA.

The *St. Petersburger Medizinische Wochenschrift* publishes a *résumé* of Dr. N. A. Sokoloff's little work on the Morbid Changes in Joints observed in Syringomyelia. These changes occur, according to the author, very frequently. They are chiefly observed in the upper extremities, and are very chronic. A characteristic symptom of these affections, as in tabetic arthropathy, is their painlessness. It is easy to diagnose them anatomically and clinically. Fixation of the joints in the early stage of the complaint, or operative interference in advanced and marked cases, is indicated. —*Lancet.*

ARSENIC FOR TRICHINOSIS.

Dr. W. H. Merrill, Pepperill, Mass., in a very interesting article in the New York *Medical Journal*, reports a case of this very uncomfortable and usually fatal disease in which the administration of liq. potass. arsenitis in 5 drops three times a day, and increased 3 drops per day until the constitutional effects of the remedy became visible, effected promptly a permanent cure in about 25 days from the first dose. During the time as much as 36 drops were taken during the day, but as soon as arsenical symptoms were visible the dose was decreased temporarily. Although arsenic has not heretofore been noted as a remedial in this disease, yet the failure of nearly if not quite all other remedies in cases where the trichinæ were developed, and this case being so marked a success, warrant its trial in future and the publicity that can be given to this remedial.

SULFONAL IN TRISMUS NASCENTIUM.

J. Berenyi (*Pesther Medchir. Presse*) reports the case on an infant which on the fifth day after birth was attacked with trismic convulsions, having five crises in as many hours. These crises continued with greater or less frequency until the eighth day, resisting all treatment. Berenyi then administered sulfonal in 3-grain doses by rectal injection and by the mouth. The crises at once diminished in severity and frequency, and ceased completely on the sixth day, with no further return. The total amount of sulfonal administered was 150 grains, and at no time was there noted any tendency to somnolency or other untoward symptom due to the remedy.